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NPIC/R-1033/62

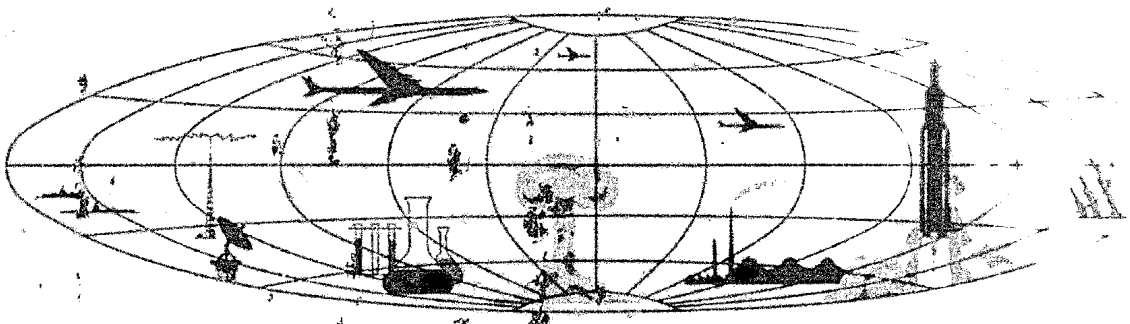
August 1962

PHOTOGRAPHIC INTERPRETATION REPORT

MISSILE - ASSOCIATED INTERFEROMETER INSTRUMENTATION SITES USSR

ARMY NAVY AIR FORCE CIA

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER



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MISSILE - ASSOCIATED INTERFEROMETER INSTRUMENTATION SITES

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INTRODUCTION

A total of 15 missile-associated interferometer* instrumentation sites (including one probable and one possible site) have been identified in the USSR from aerial photography during the period 25X1. Seven sites had been observed 3 associated with the Tyura Tam Missile Test Range (TTMTR), 3 with the Kapustin Yar Missile Test Range (KYMTR), and one isolated site at Khutor. 25X1 25X1 This report presents locational, mensural, and other pertinent information of the 15 sites based on a study of the photography. In some cases, extreme obliquity and cloud cover preclude detailed analysis. For comparative purposes, line drawings and photographs are shown at the same scale and orientation, where practical. 25X1

A typical interferometer instrumentation site has an interferometer and a nearby support area. A missile-associated interferometer is composed of two perpendicular crossarms approximately 400 feet long at the ends of which are one or more domed instruments. A bunker is positioned near the center of the crossarms. A circular road approximately 1,000 feet in diameter and a circular fence approximately 1,200 feet in diameter enclose the area. 25X1 25X1 The "Radar A"* consists of a domed silo 20 feet in diameter with an attached building measuring 25X1. Six sites have no known "Radar A", whereas two sites have as many as five. 25X1 "Radar A" identified at the north end of the forward "L" at Kapustin Yar had the dome removed from the silo. 25X1

*The interferometers discussed in this report have perpendicular bisecting baselines. These tracking installations are fixed, ground-based devices that employ phase-measuring techniques.

25X1

25X1

As shown in Table 1*, the 15 sites have many similarities -- both in the size and amount of equipment in the interferometer area and in the number and type of buildings in the support area.

Probably because of their isolation, the interferometer sites at the SSATC have more buildings than other sites. This situation probably is a result of the greater need for personnel housing and not because of a functional difference in the interferometers themselves.

25X1

25X1

*Page 39.

25X1

SSATC SITES

Only those instrumentation sites at the SSATC that contain an interferometer are covered in this report.

Instrumentation Site 1. Instrumentation Site 1 (Figures 1 and 2) is located on the west shore of Lake Balkhash. Unlike the other interferometers at the SSATC, this site is not in the vicinity of the impact area. The crossarms are situated on an earth mound 640 feet square. The circular road apparently is elevated to a constant height. This site is characterized by additional equipment not found at any other instrumentation sites. As shown on Figure 2, the site has four single rhombic antennas (oriented toward Moscow) and a circular concrete pad with several vehicles on it. The pad with the vehicles appears to be additional instrumentation and may be required by a functional difference between this site and the other sites at the SSATC. Site 1 most closely resembles the Khutor site, which may also have rhombic antennas in the vicinity and is definitely situated near a KRUG site.

Instrumentation Site 4. Instrumentation Site 4 is visible on photography of excellent quality, although one portion of the interferometer is obscured by clouds (Figures 3 and 4). The crossarm pattern appears to be leveled earth which has been built up several feet above ground level. The circular road also appears to be built up to a constant height. The site is characterized by a group of five "Radar As". Adjacent to these "Radar As" is a building with a flat roof (item 3, Figure 4) which has approximately 24 vents or skylights.

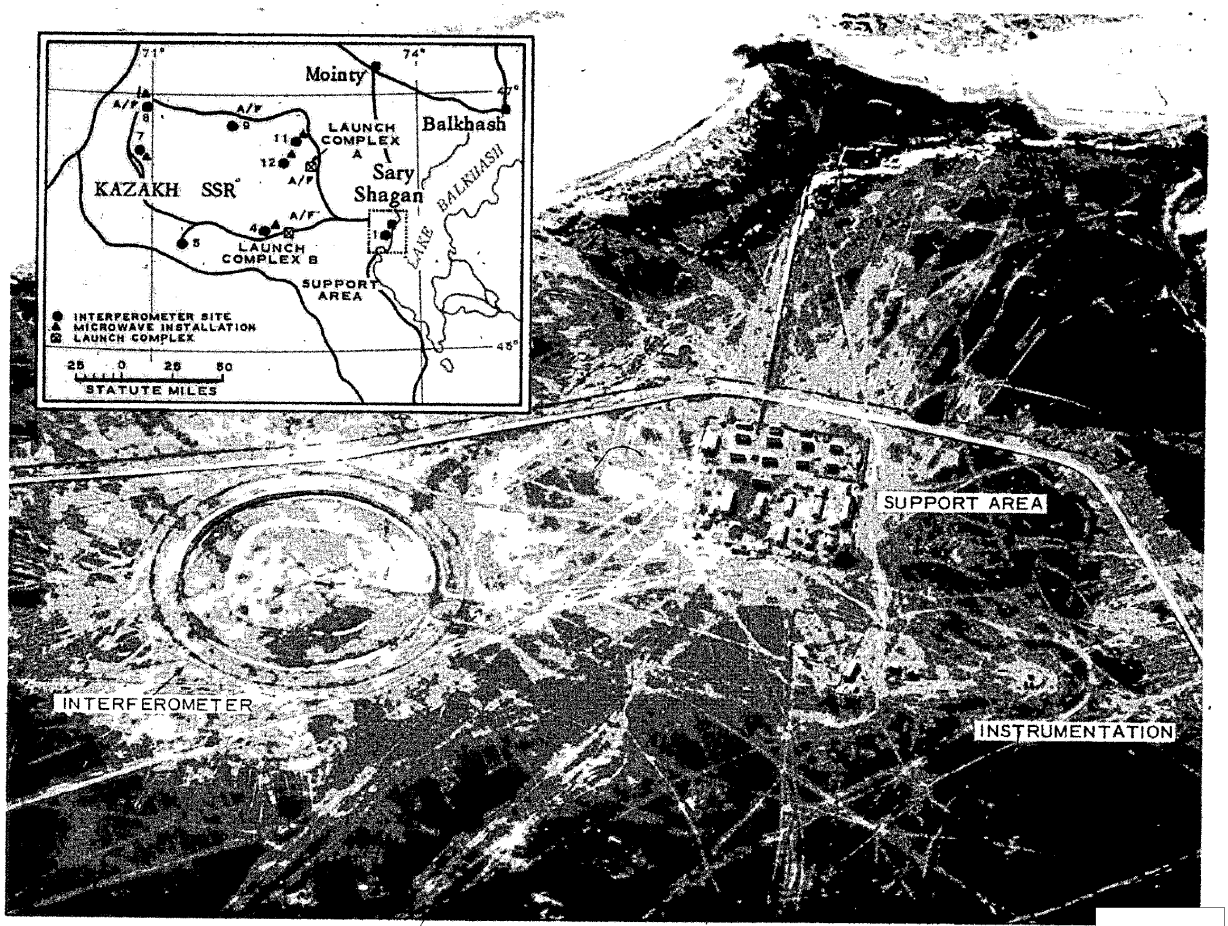

FIGURE 1. INSTRUMENTATION SITE 1, SSATC [redacted]

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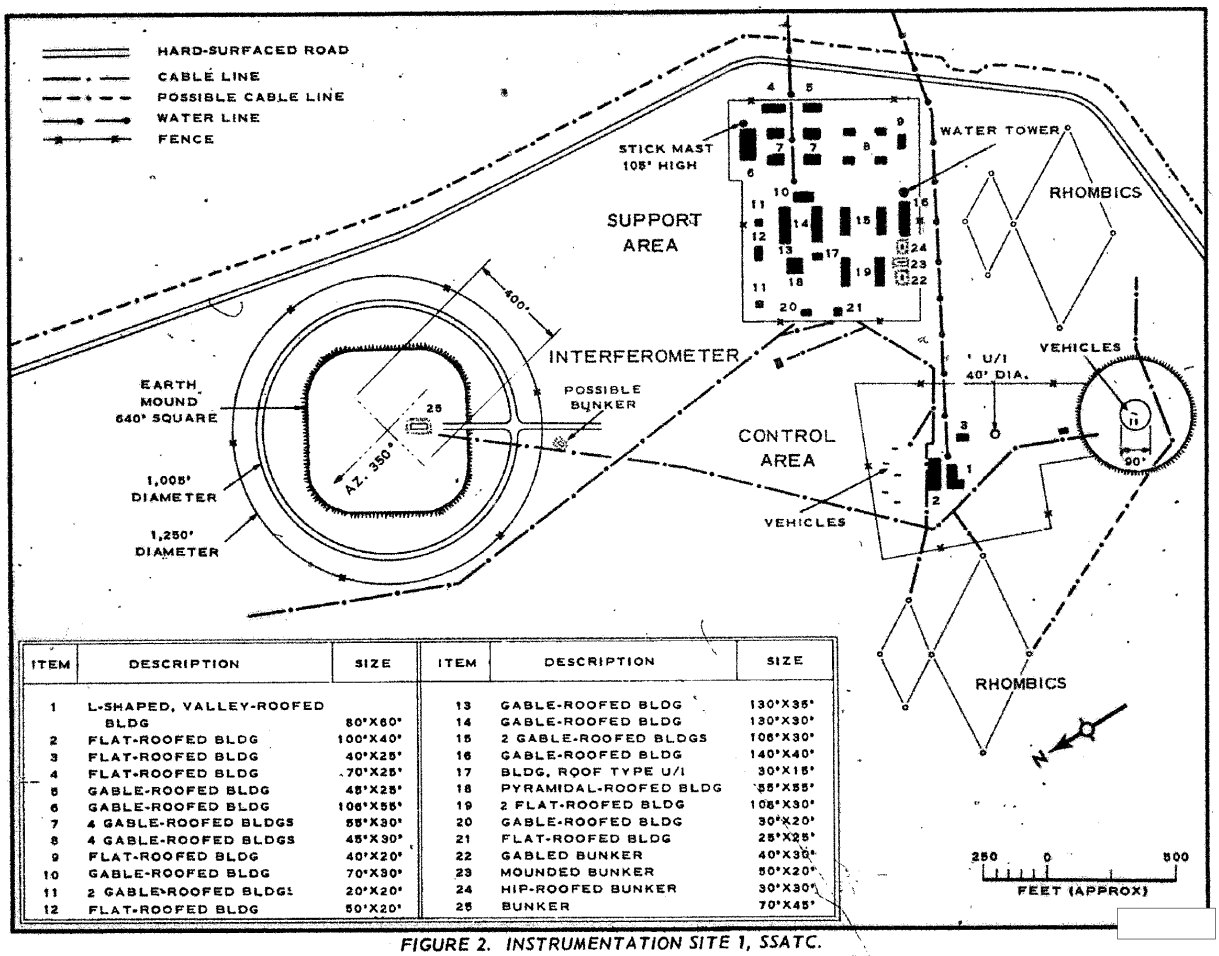
25X1



ITEM	DESCRIPTION	SIZE	ITEM	DESCRIPTION	SIZE
1	L-SHAPED, VALLEY-ROOFED BLDG	80'X60'	13	GABLE-ROOFED BLDG	130'X35'
2	FLAT-ROOFED BLDG	100'X40'	14	GABLE-ROOFED BLDG	130'X30'
3	FLAT-ROOFED BLDG	40'X25'	15	2 GABLE-ROOFED BLDGS	105'X30'
4	FLAT-ROOFED BLDG	70'X25'	16	GABLE-ROOFED BLDG	140'X40'
5	GABLE-ROOFED BLDG	45'X25'	17	BLDG, ROOF TYPE U/I	30'X15'
6	GABLE-ROOFED BLDG	105'X55'	18	PYRAMIDAL-ROOFED BLDG	55'X55'
7	4 GABLE-ROOFED BLDGS	55'X30'	19	2 FLAT-ROOFED BLDG	105'X30'
8	4 GABLE-ROOFED BLDGS	45'X30'	20	GABLE-ROOFED BLDG	30'X20'
9	FLAT-ROOFED BLDG	40'X20'	21	FLAT-ROOFED BLDG	25'X25'
10	GABLE-ROOFED BLDG	70'X30'	22	GABLED BUNKER	40'X30'
11	2 GABLE-ROOFED BLDGS	20'X20'	23	MOUNDED BUNKER	50'X20'
12	FLAT-ROOFED BLDG	50'X20'	24	HIP-ROOFED BUNKER	30'X30'
			25	BUNKER	70'X45'

FIGURE 2. INSTRUMENTATION SITE 1, SSATC.

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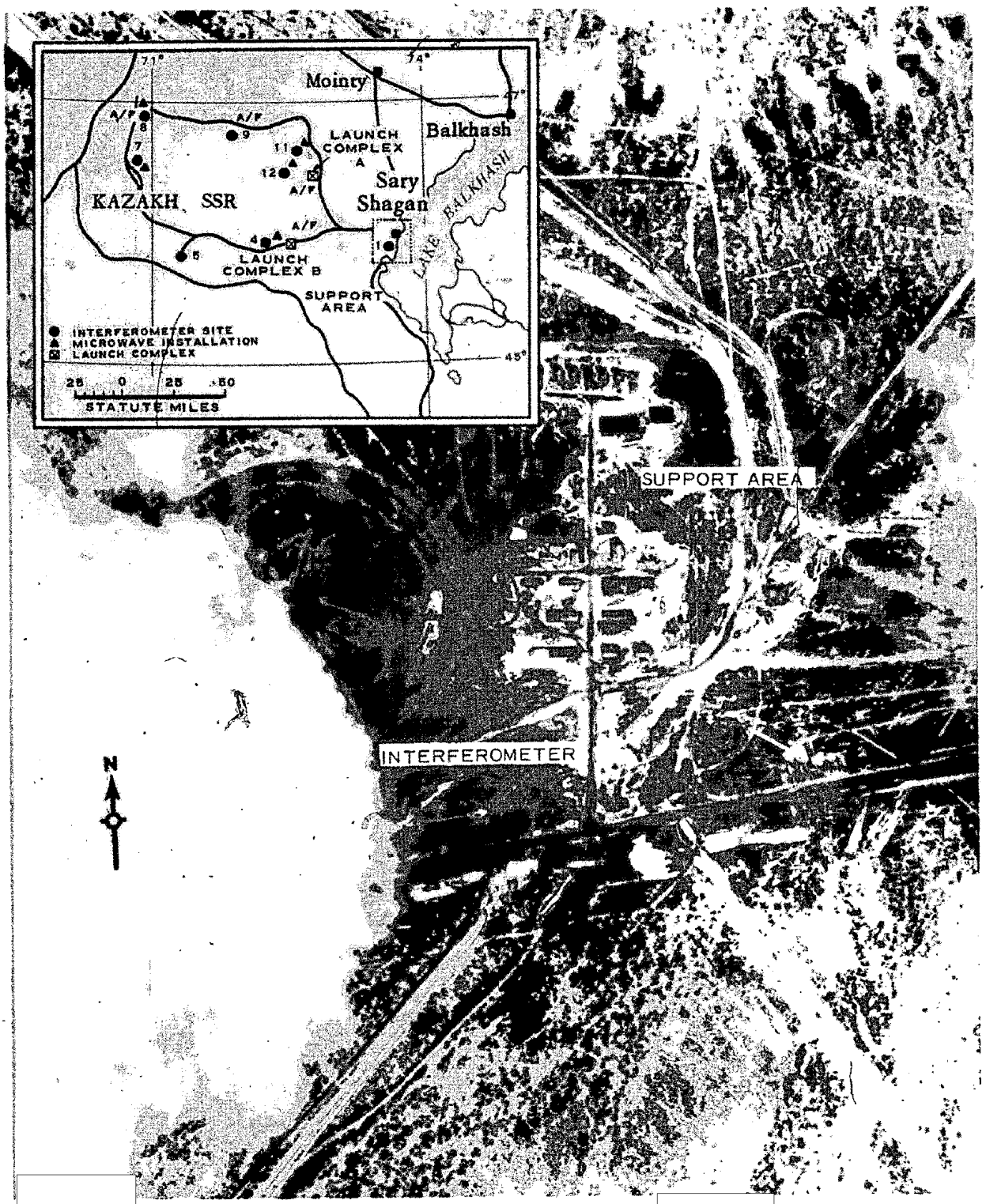

FIGURE 3. INSTRUMENTATION SITE 4, SSATC

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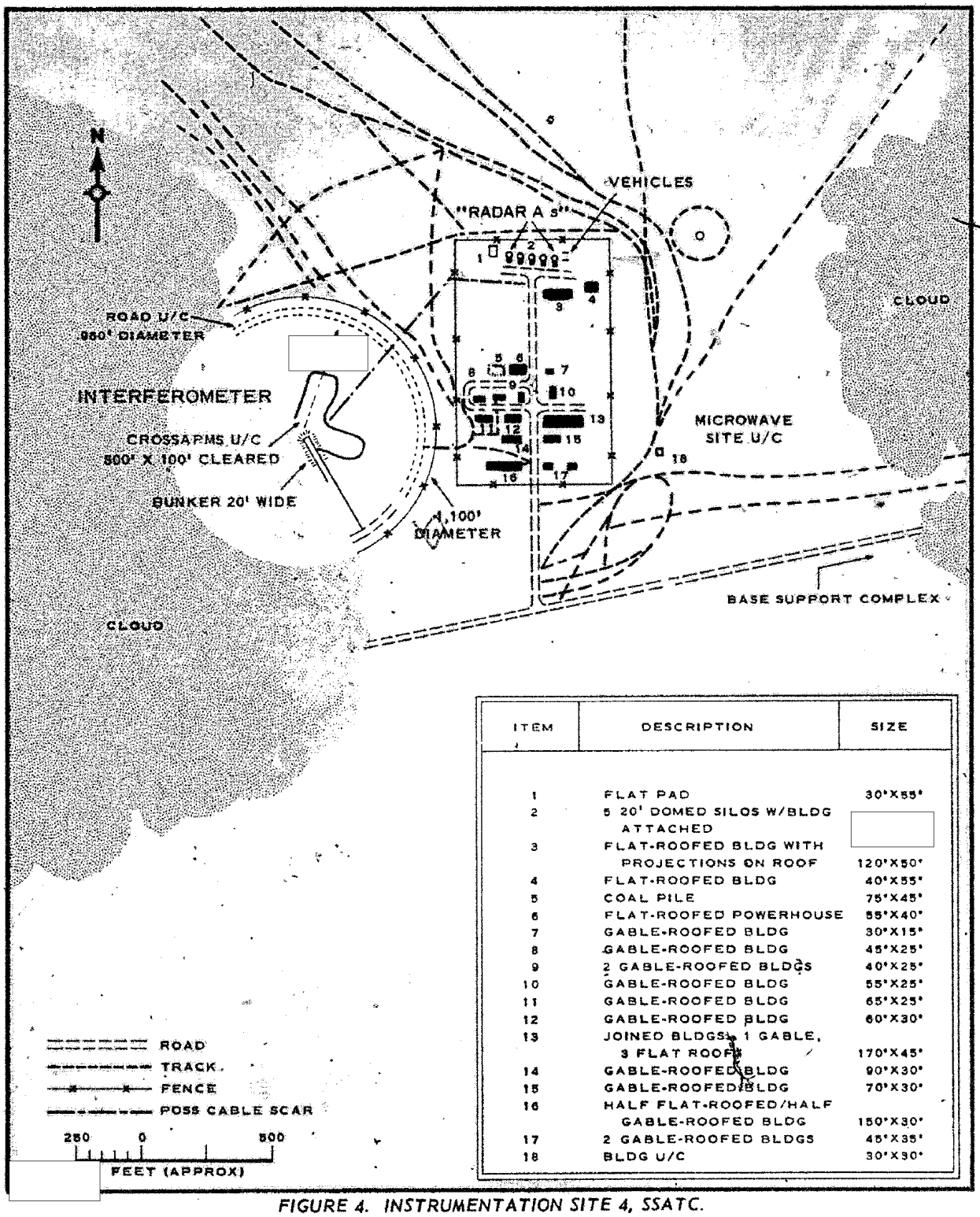

ITEM	DESCRIPTION	SIZE
1	FLAT PAD	30'X55'
2	5 20' DOMED SILOS W/BLDG ATTACHED	
3	FLAT-ROOFED BLDG WITH PROJECTIONS ON ROOF	120'X50'
4	FLAT-ROOFED BLDG	40'X55'
5	COAL PILE	75'X45'
6	FLAT-ROOFED POWERHOUSE	55'X40'
7	GABLE-ROOFED BLDG	30'X15'
8	GABLE-ROOFED BLDG	45'X25'
9	2 GABLE-ROOFED BLDGS	40'X25'
10	GABLE-ROOFED BLDG	55'X25'
11	GABLE-ROOFED BLDG	65'X25'
12	GABLE-ROOFED BLDG	60'X30'
13	JOINED BLDGS: 1 GABLE, 3 FLAT ROOF	170'X45'
14	GABLE-ROOFED BLDG	90'X30'
15	GABLE-ROOFED BLDG	70'X30'
16	HALF FLAT-ROOFED/HALF GABLE-ROOFED BLDG	150'X30'
17	2 GABLE-ROOFED BLDGS	45'X35'
18	BLDG U/C	30'X30'

25X1

25X1

25X1

FIGURE 4. INSTRUMENTATION SITE 4, SSATC.

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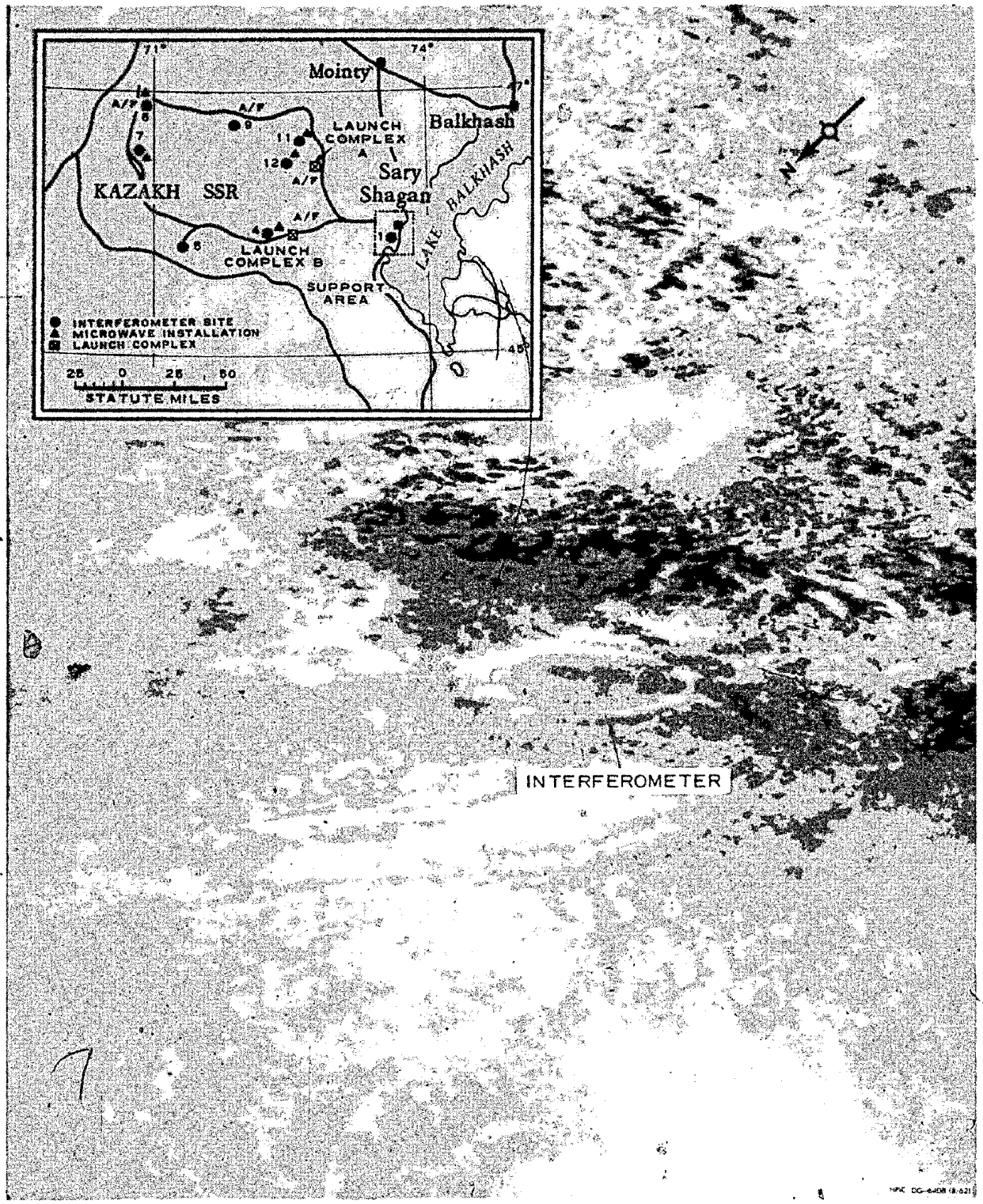

FIGURE 5. INSTRUMENTATION SITE 5, SSATC

25X1

25X1

Instrumentation Site 5. Instrumentation Site 5 appears on heavily clouded, far-oblique photography which shows only the interferometer (Figure 5). The site has a circumferential road and a road leading into the probable central control bunker. It cannot be determined whether the cleared area is fenced.

Instrumentation Site 7. Excellent, cloud-free photography allows a detailed interpretation of Instrumentation Site 7 (Figures 6 and 7). A large amount of scarring is discernible in the vicinity of the interferometer, but no instruments can be seen on the crossarms. As at Site 4, the crossarm pattern is on leveled earth, and the circular road appears to be elevated to a constant height. Most of the scarring on the crossarms extends approximately 200 feet from the center of the interferometer. The site has three "Radar As". A possible cable scar connects the inner bunker of the interferometer to the "Radar As". The site also has a Token-type radar with associated vehicles and a microwave installation 240 feet from the support area. A dish is barely visible on the lattice tower.

Instrumentation Site 8. Instrumentation Site 8 is larger than many of the other range instrumentation sites at the SSATC. Although the site is partly obscured by clouds, items visible on the cloud-free portions of the photography include the interferometer, at least 33 buildings, an airfield, a Token radar, a possible Bar Lock radar, a microwave installation, and numerous vehicles (Figures 8 and 9). A small unidentified instrumentation site with one building and at least four vehicles is 3.4 nautical miles (nm) south of Site 8. Although no "Radar As" have been identified at this site, additional facilities may exist in the cloud-covered portions of the site.

Instrumentation Site 9. Analysis of the buildings, the microwave installation, and the airfield at Instrumentation Site 9 identifies it as an interferometer site (Figures 10 and 11). Although cloud cover does not permit identification of the interferometer itself, on the basis of the location of

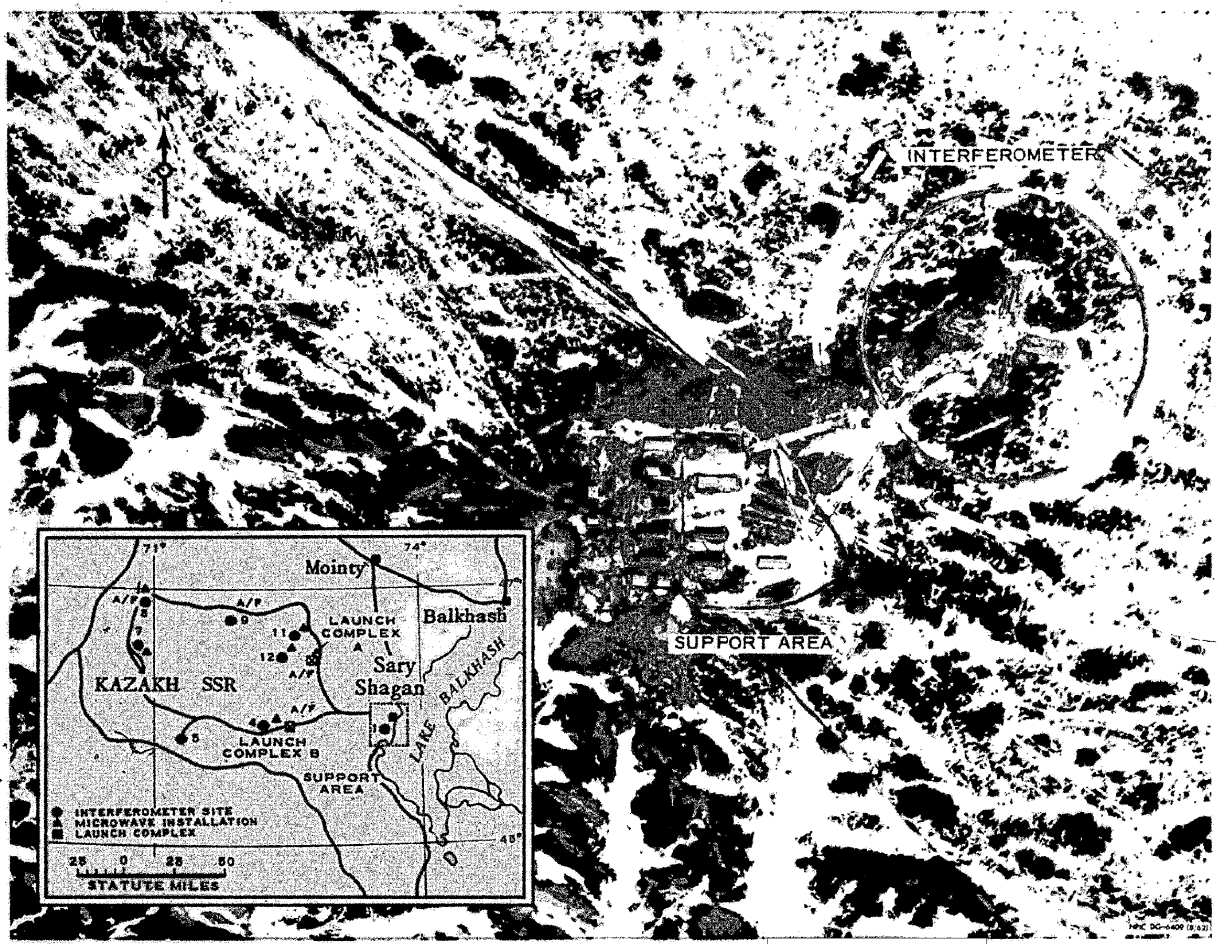

FIGURE 6. INSTRUMENTATION SITE 7, SSATC

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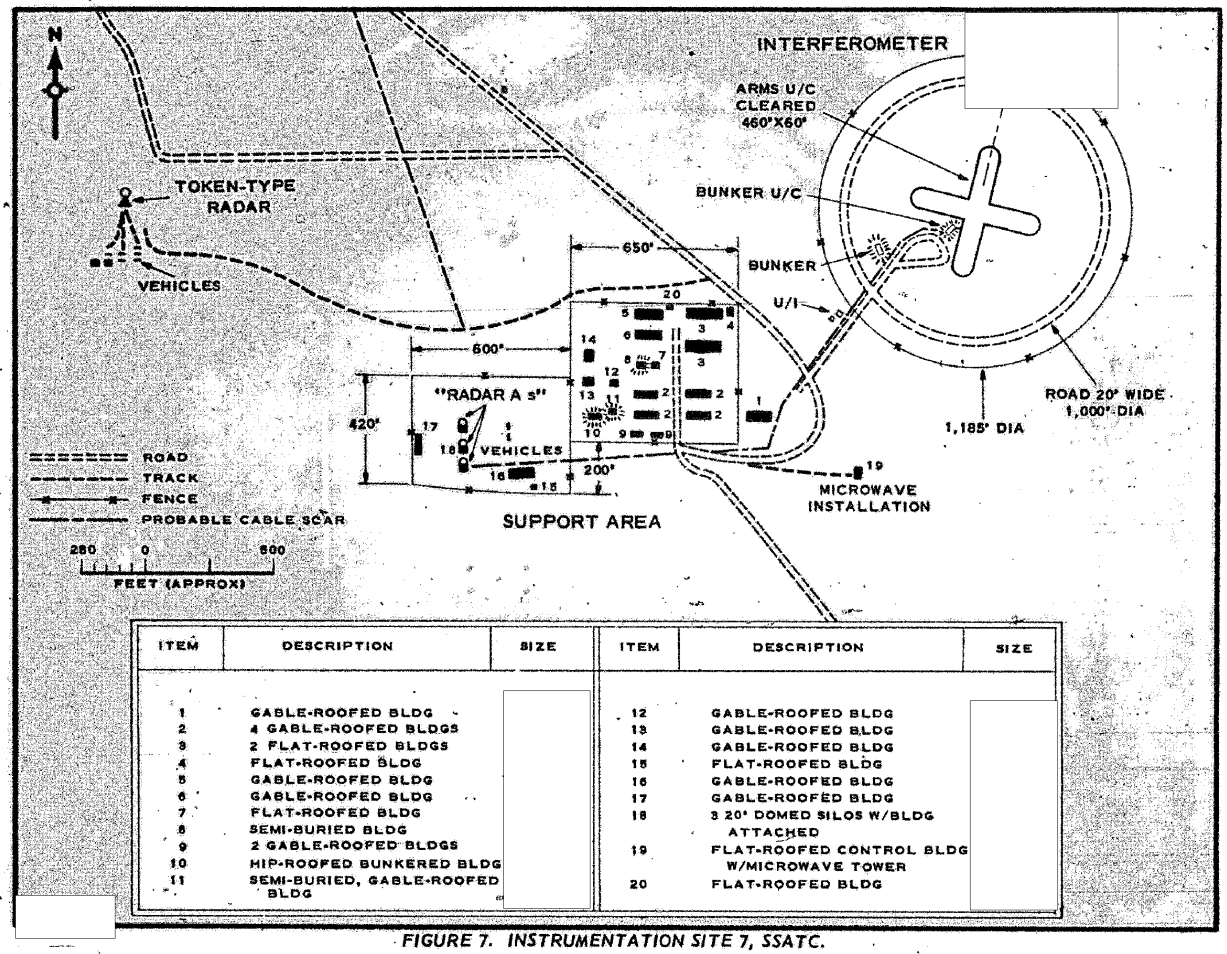
25X1



ITEM	DESCRIPTION	SIZE	ITEM	DESCRIPTION	SIZE
1	GABLE-ROOFED BLDG		12	GABLE-ROOFED BLDG	
2	4 GABLE-ROOFED BLDGS		13	GABLE-ROOFED BLDG	
3	2 FLAT-ROOFED BLDGS		14	GABLE-ROOFED BLDG	
4	FLAT-ROOFED BLDG		15	FLAT-ROOFED BLDG	
5	GABLE-ROOFED BLDG		16	GABLE-ROOFED BLDG	
6	GABLE-ROOFED BLDG		17	GABLE-ROOFED BLDG	
7	FLAT-ROOFED BLDG		18	3 20' DOMED SILOS W/BLDG ATTACHED	
8	SEMI-BURIED BLDG		19	FLAT-ROOFED CONTROL BLDG W/MICROWAVE TOWER	
9	2 GABLE-ROOFED BLDGS		20	FLAT-ROOFED BLDG	
10	HIP-ROOFED BUNKERED BLDG				
11	SEMI-BURIED, GABLE-ROOFED BLDG				

FIGURE 7. INSTRUMENTATION SITE 7, SSATC.

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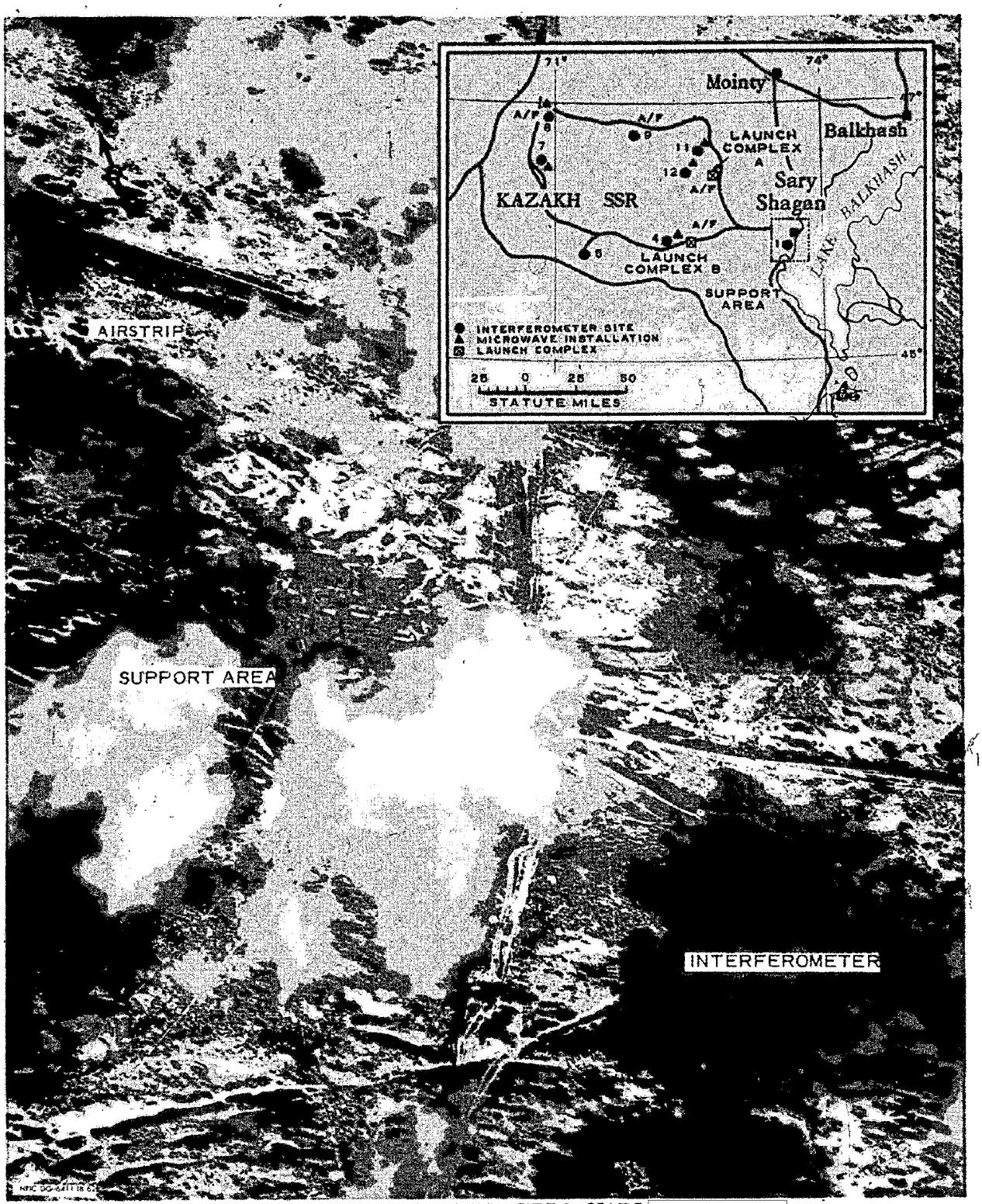

FIGURE 8. INSTRUMENTATION SITE 8, SSATC

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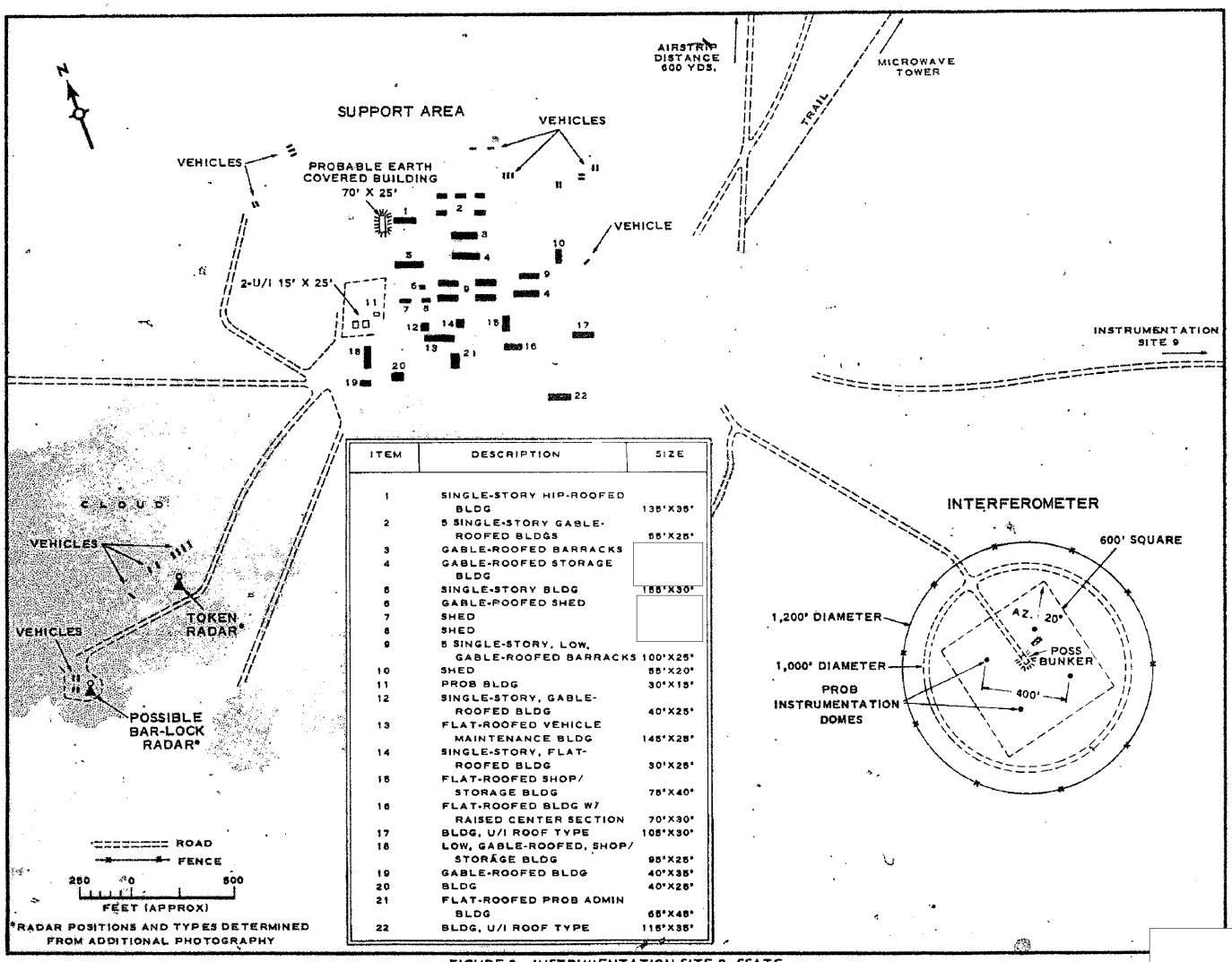

ITEM	DESCRIPTION	SIZE
1	SINGLE-STORY HIP-ROOFED BLDG	135'X35'
2	5 SINGLE-STORY GABLE-ROOFED BLDGS	55'X25'
3	GABLE-ROOFED BARRACKS	
4	GABLE-ROOFED STORAGE BLDG	
5	SINGLE-STORY BLDG	155'X30'
6	GABLE-ROOFED SHED	
7	SHED	
8	SHED	
9	5 SINGLE-STORY, LOW, GABLE-ROOFED BARRACKS	100'X25'
10	SHED	55'X20'
11	PROB BLDG	30'X15'
12	SINGLE-STORY, GABLE-ROOFED BLDG	40'X25'
13	FLAT-ROOFED VEHICLE MAINTENANCE BLDG	145'X25'
14	SINGLE-STORY, FLAT-ROOFED BLDG	30'X25'
15	FLAT-ROOFED SHOP/ STORAGE BLDG	75'X40'
16	FLAT-ROOFED BLDG W/ RAISED CENTER SECTION	70'X30'
17	BLDG, U/I ROOF TYPE	105'X30'
18	LOW, GABLE-ROOFED, SHOP/ STORAGE BLDG	95'X25'
19	GABLE-ROOFED BLDG	40'X35'
20	BLDG	40'X25'
21	FLAT-ROOFED PROB ADMIN BLDG	65'X45'
22	BLDG, U/I ROOF TYPE	115'X35'

25X1

25X1

25X1

FIGURE 9. INSTRUMENTATION SITE 8, SSATC.

other interferometers with respect to their support areas and to the impact area, it is assumed that the interferometer is south or southwest of the support area. The airstrip associated with this site has been described previously. 1/

Instrumentation Site 11. Deep shadows and cloud cover restrict interpretation of Instrumentation Site 11 (Figures 12 and 13). 25X1

25X1

Like most of the other instrumentation sites, a microwave installation is located nearby. Although the "Radar As" cannot be seen, the items that are visible appear on Figure 13. 25X1

Instrumentation Site 12. Instrumentation Site 12 is located near Launch Complex A (Figures 14 and 15). Although obliquity and cloud cover prevent detailed interpretation of much of the site, the interferometer shows little construction debris and may be complete. North of the support area is a fenced area, possibly a microwave installation, which contains a building. Adjacent to this fenced area is a regular pattern of ground scarring, the purpose of which has not been determined.

25X1

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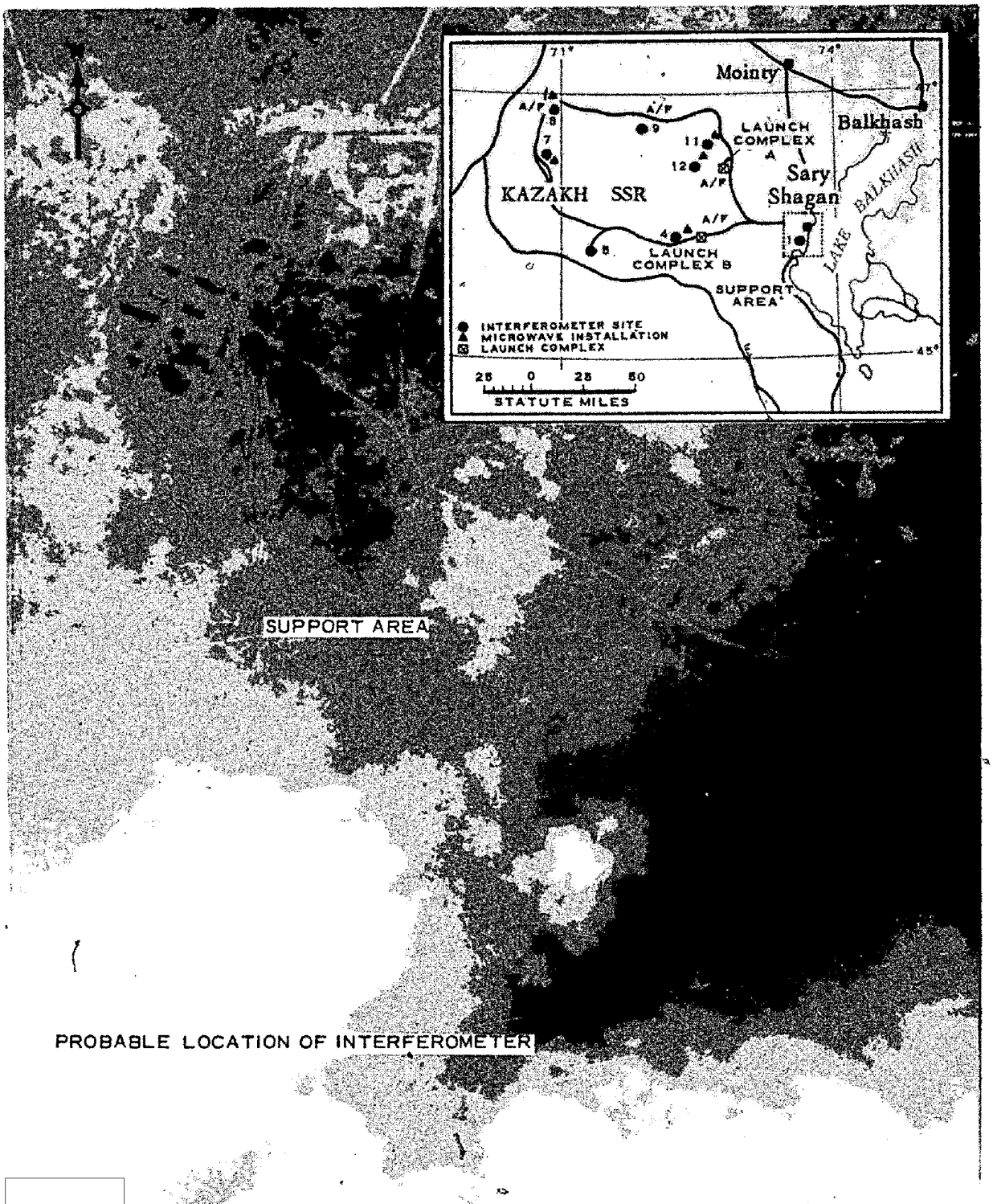

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25X1

FIGURE 10. INSTRUMENTATION SITE 9, SSATC

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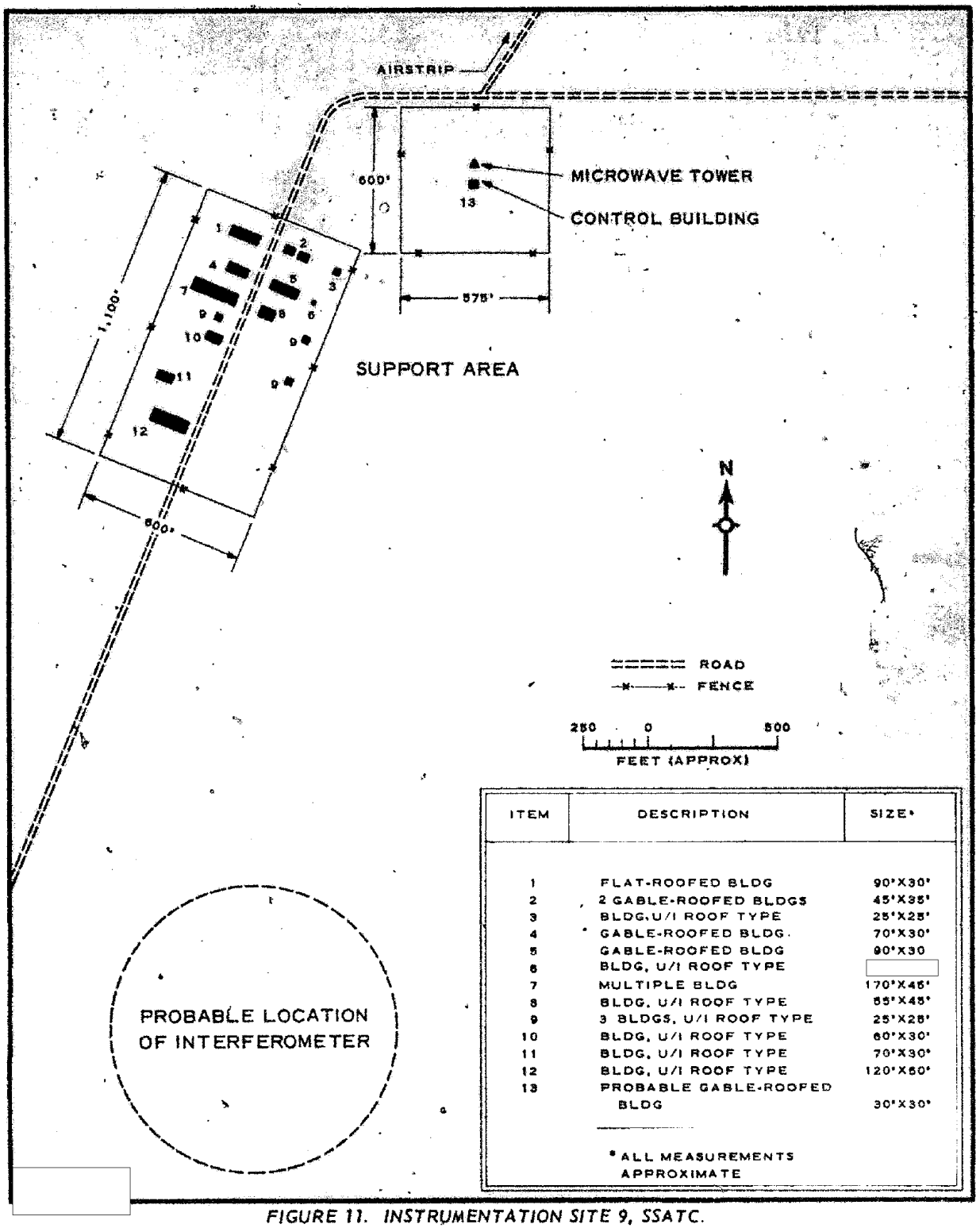
25X1



ITEM	DESCRIPTION	SIZE*
1	FLAT-ROOFED BLDG	90'X30'
2	2 GABLE-ROOFED BLDGS	45'X35'
3	BLDG, U/I ROOF TYPE	25'X25'
4	GABLE-ROOFED BLDG.	70'X30'
5	GABLE-ROOFED BLDG	90'X30
6	BLDG, U/I ROOF TYPE	
7	MULTIPLE BLDG	170'X45'
8	BLDG, U/I ROOF TYPE	55'X45'
9	3 BLDGS, U/I ROOF TYPE	25'X25'
10	BLDG, U/I ROOF TYPE	60'X30'
11	BLDG, U/I ROOF TYPE	70'X30'
12	BLDG, U/I ROOF TYPE	120'X50'
13	PROBABLE GABLE-ROOFED BLDG	30'X30'

*ALL MEASUREMENTS APPROXIMATE

25X1

25X1

FIGURE 11. INSTRUMENTATION SITE 9, SSATC.

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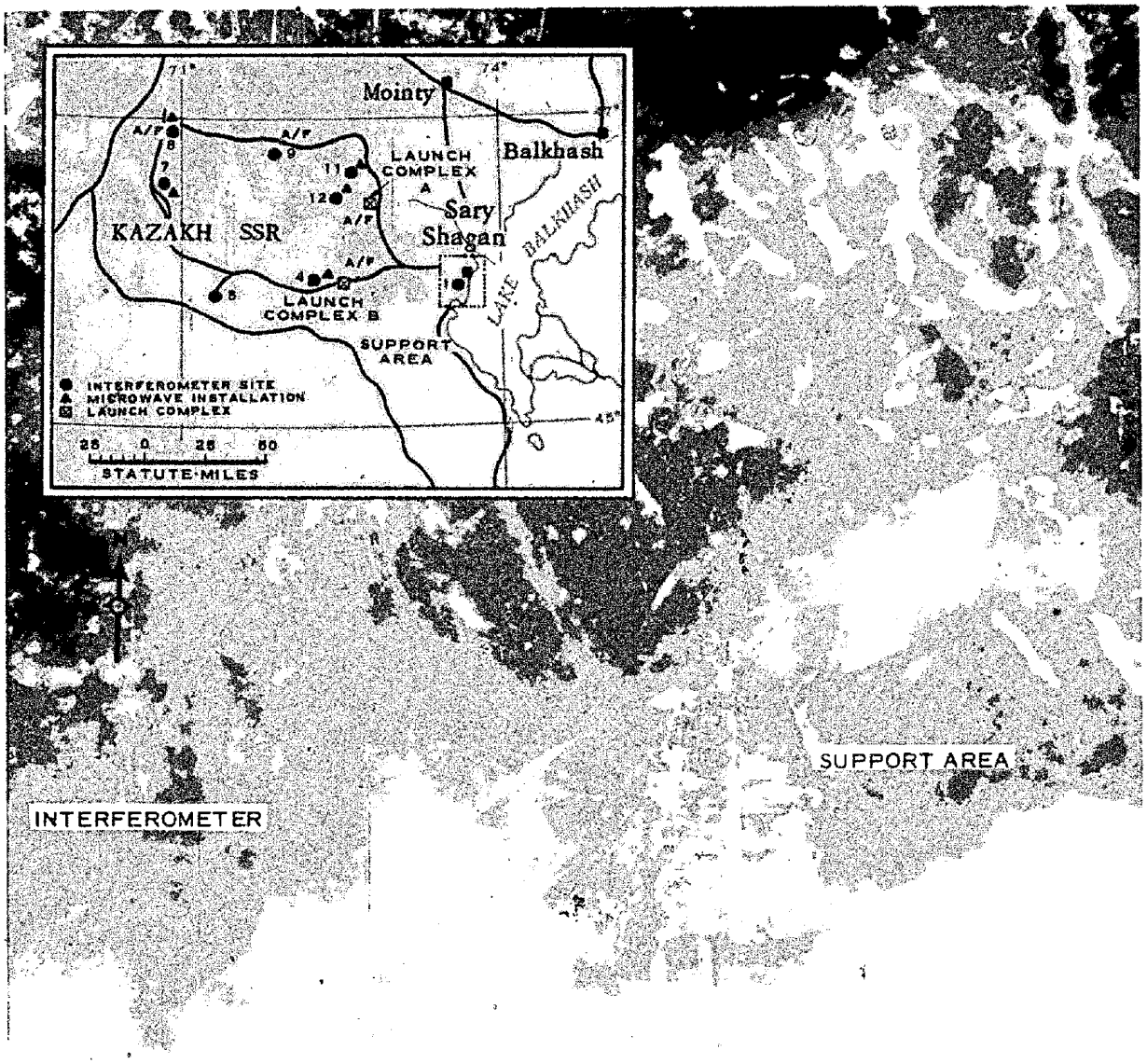

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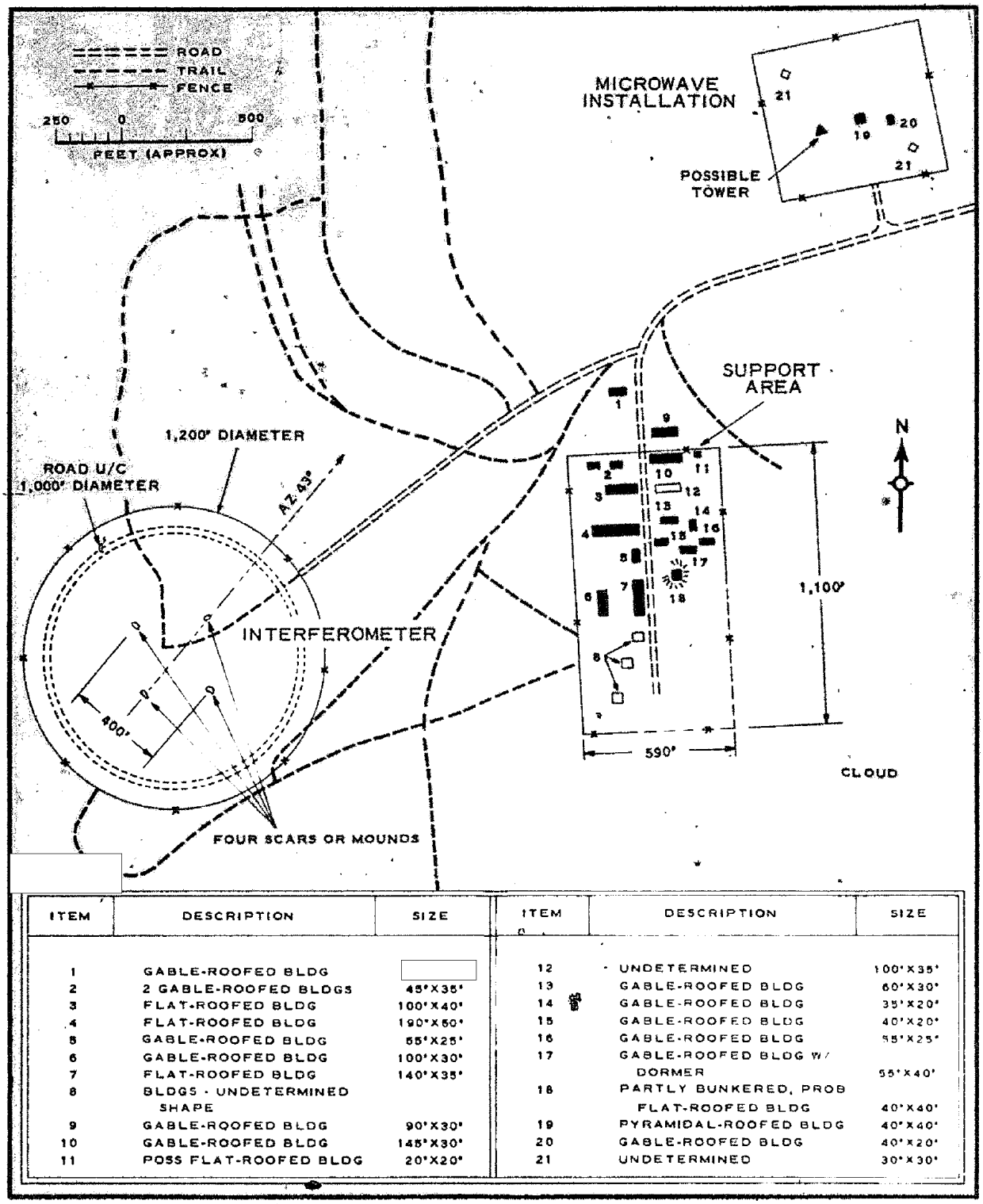
25X1

FIGURE 12. INSTRUMENTATION SITE 11, SSATC

25X1



25X1

ITEM	DESCRIPTION	SIZE	ITEM	DESCRIPTION	SIZE
1	GABLE-ROOFED BLDG	[redacted]	12	UNDETERMINED	100'X35'
2	2 GABLE-ROOFED BLDGS	45'X35'	13	GABLE-ROOFED BLDG	60'X30'
3	FLAT-ROOFED BLDG	100'X40'	14	GABLE-ROOFED BLDG	35'X20'
4	FLAT-ROOFED BLDG	190'X50'	15	GABLE-ROOFED BLDG	40'X20'
5	GABLE-ROOFED BLDG	55'X25'	16	GABLE-ROOFED BLDG	55'X25'
6	GABLE-ROOFED BLDG	100'X30'	17	GABLE-ROOFED BLDG W/ DORMER	55'X40'
7	FLAT-ROOFED BLDG	140'X35'	18	PARTLY BUNKERED, PROB FLAT-ROOFED BLDG	40'X40'
8	BLDGS - UNDETERMINED SHAPE		19	PYRAMIDAL-ROOFED BLDG	40'X40'
9	GABLE-ROOFED BLDG	90'X30'	20	GABLE-ROOFED BLDG	40'X20'
10	GABLE-ROOFED BLDG	145'X30'	21	UNDETERMINED	30'X30'
11	POSS FLAT-ROOFED BLDG	20'X20'			

25X1

25X1

FIGURE 13. INSTRUMENTATION SITE 11, SSATC.

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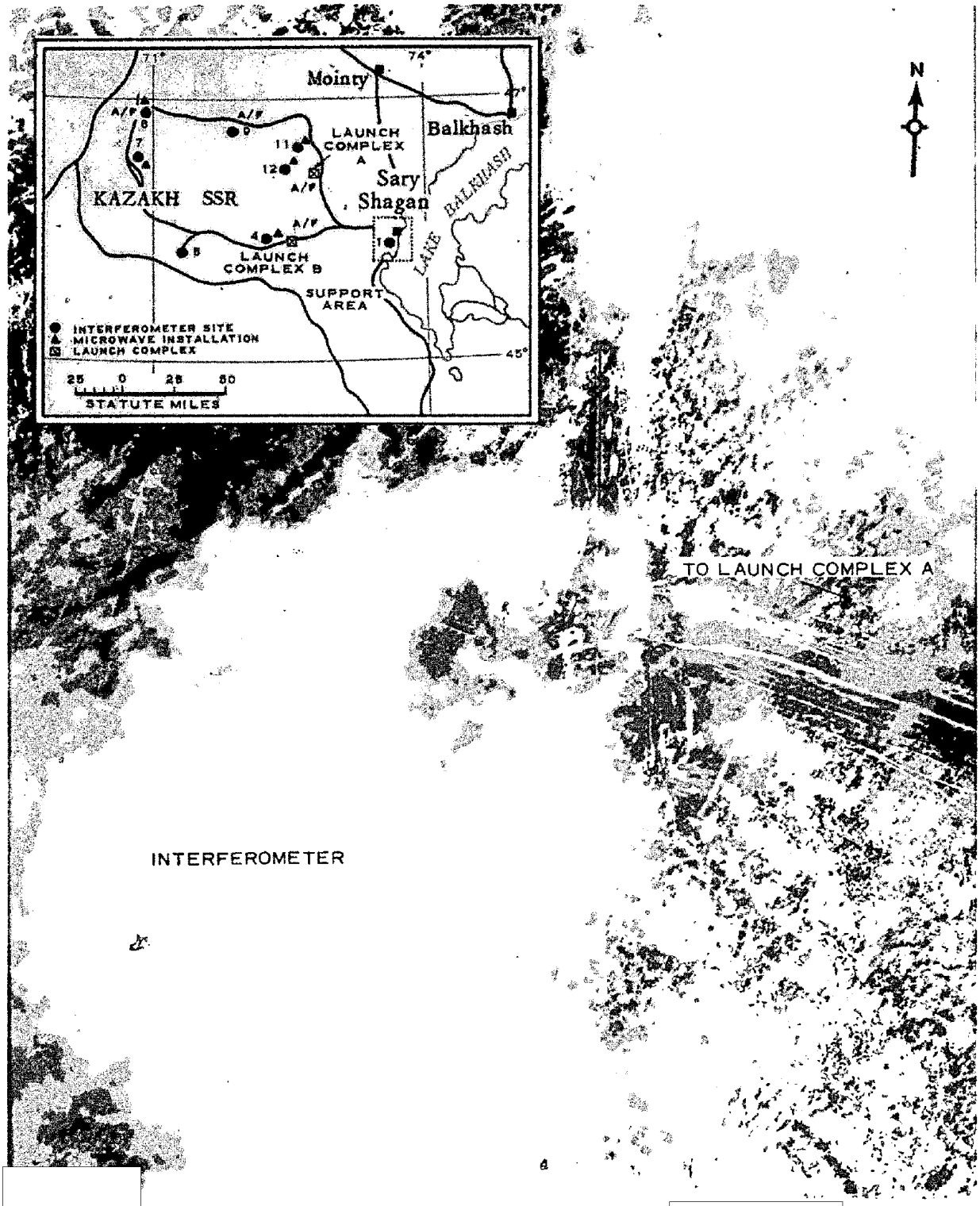

FIGURE 14. INSTRUMENTATION SITE 12, SSATC

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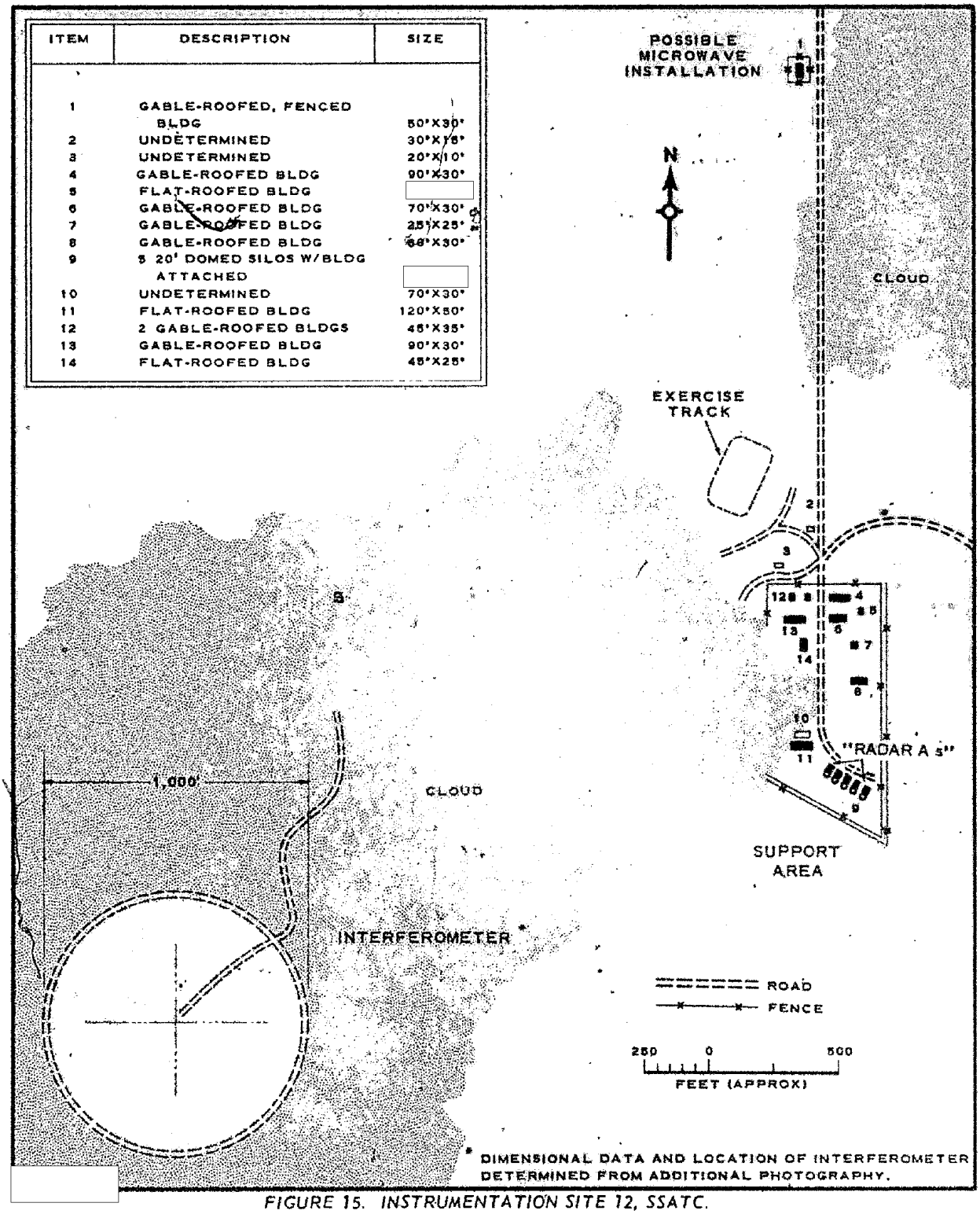
25X1



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25X1

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25X1

FIGURE 15. INSTRUMENTATION SITE 12, SSATC.

25X1

KYMTR SITES

Lake El'ton Site. The Lake El'ton instrumentation site is approximately 55 nm northeast of the Kapustin Yar Rangehead. 2/ The circumferential road, the inner bunker, and the level ground pattern within the circular area are the only items clearly discernible at the interferometer (Figure 16).

Verkhniy Baskunchak Site. The support area of the Verkhniy Baskunchak instrumentation site (Figures 17 and 18) is quite similar to the support area of the site at Launch Complex "C", Kapustin Yar. Unlike the "Radar As" at other sites, the two at this site do not have the [redacted] building attached to the silo. In contrast to the circular roads which appear to be elevated at Sites 1, 4, and 7 at the SSATC, the road encircling the interferometer appears to be below ground level. Unlike the sites at the SSATC, the support area of this site has a minimum of housing.

25X1

25X1

Launch Complex "C" Site. This possible instrumentation site has been identified by the support area, which contains a "Radar A", and by the control bunker normally found near the center of an interferometer (Figures 19 and 20). This support area is quite similar to that of the interferometer at the Tyura Tam Rangehead. No crossarms are in place, and there is no scarring to indicate that the area is being leveled or that any other construction is underway. The control bunker is under construction, indicating that it may be the first item constructed at an interferometer site.

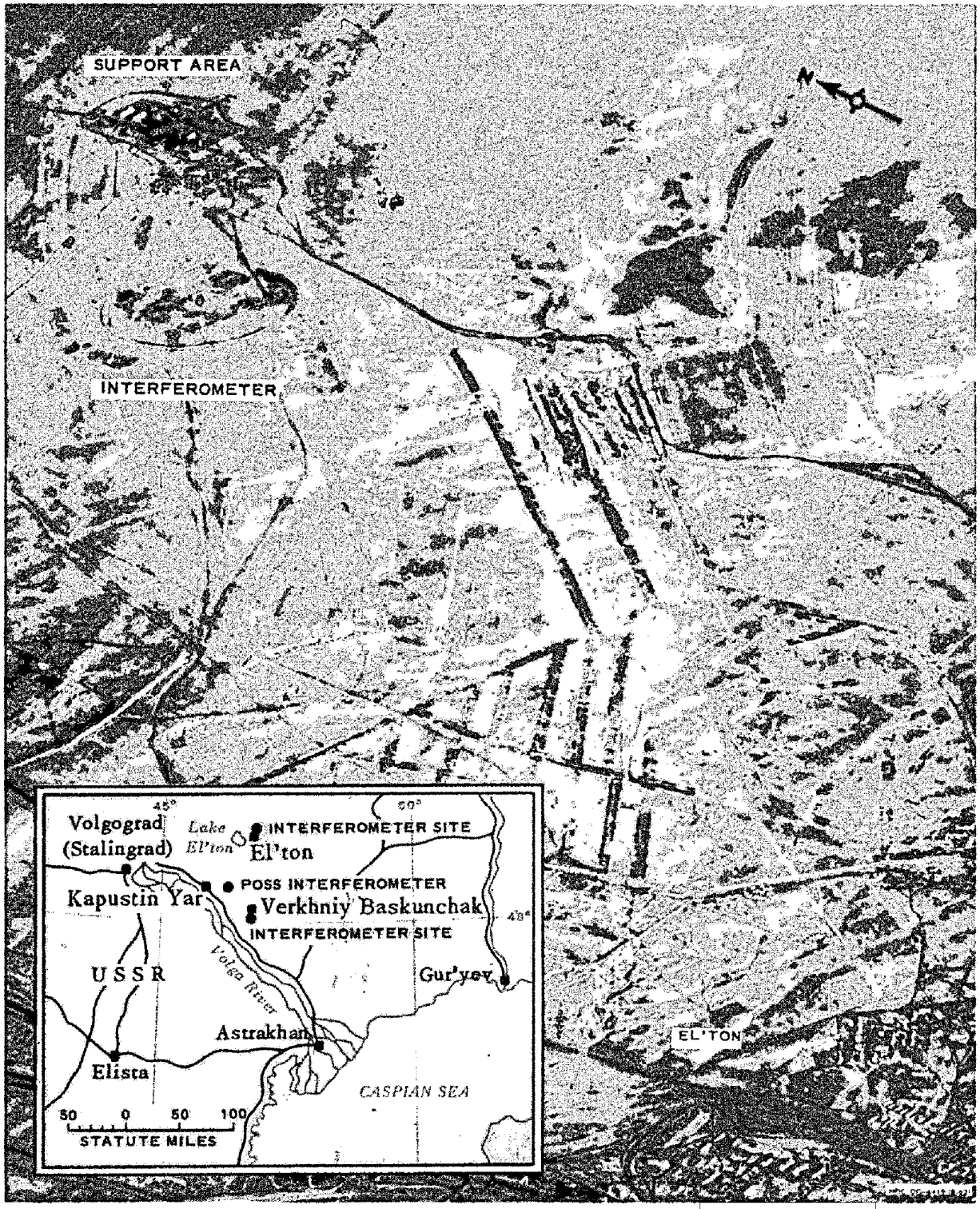

FIGURE 16. LAKE EL'TON INSTRUMENTATION SITE, KYMTR

25X1

25X1

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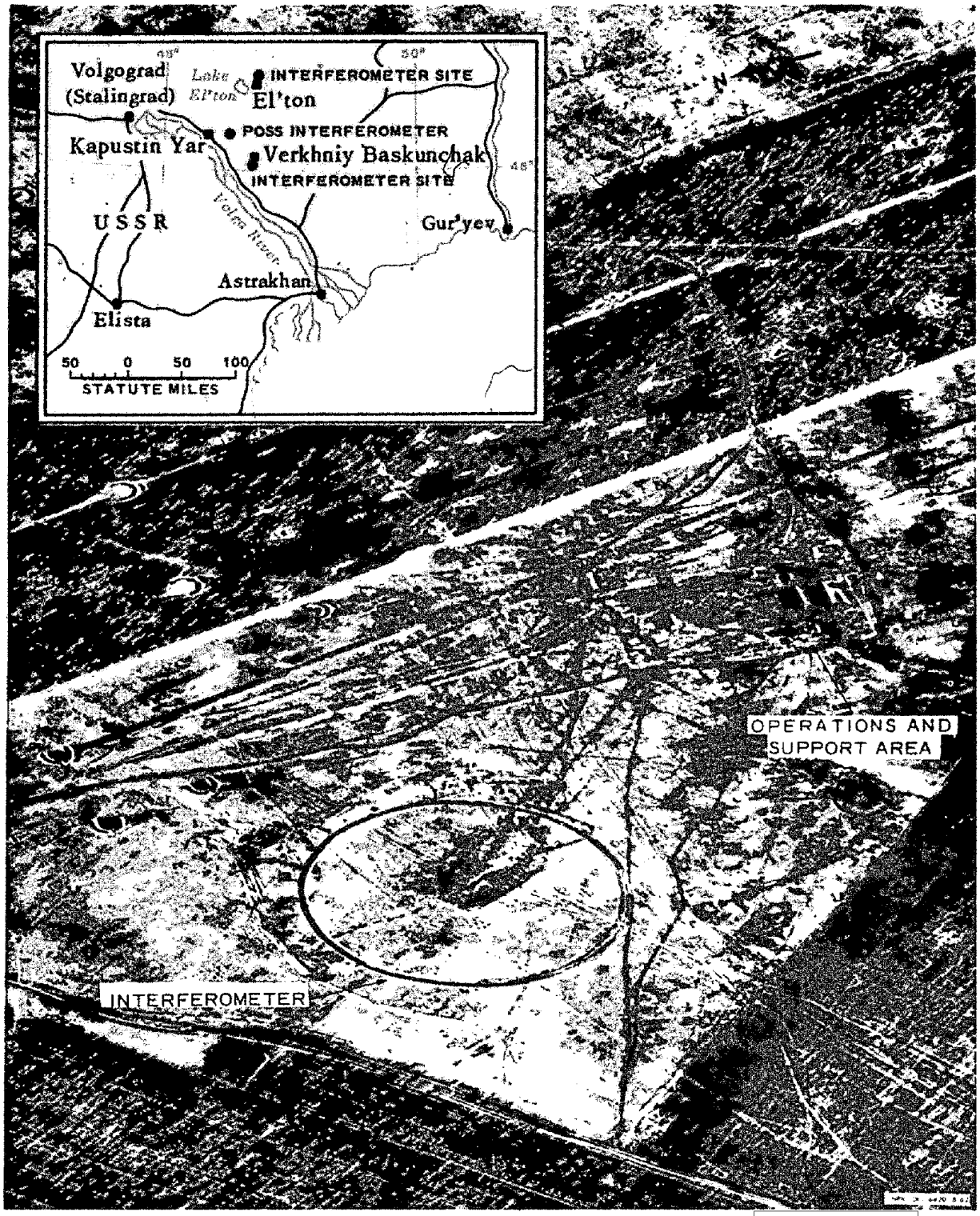

FIGURE 17. VERKHNIY BASKUNCHAK INSTRUMENTATION SITE, KYMTR

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25X1

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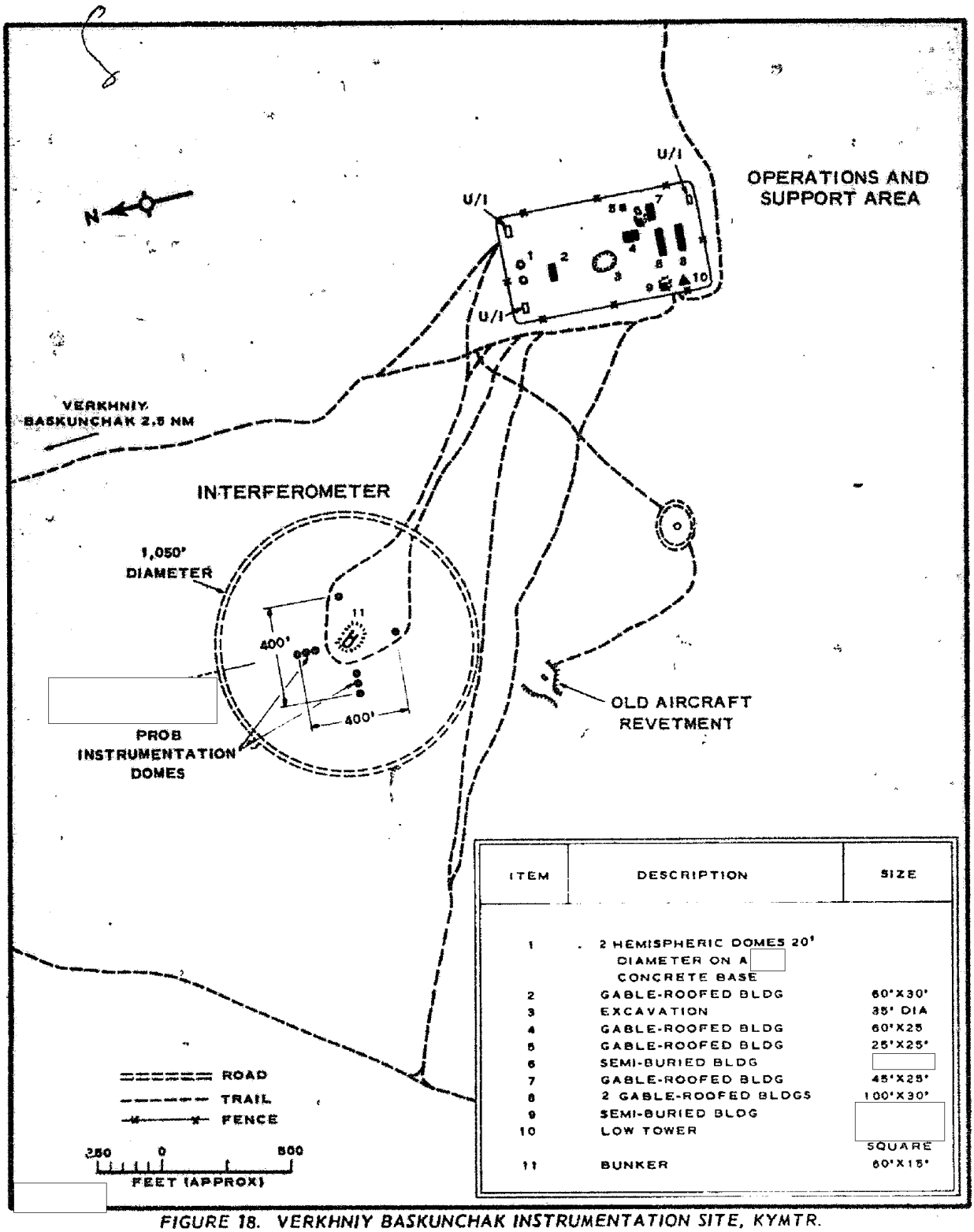

ITEM	DESCRIPTION	SIZE
1	2 HEMISPHERIC DOMES 20' DIAMETER ON A CONCRETE BASE	
2	GABLE-ROOFED BLDG	60'X30'
3	EXCAVATION	35' DIA
4	GABLE-ROOFED BLDG	60'X25
5	GABLE-ROOFED BLDG	25'X25'
6	SEMI-BURIED BLDG	
7	GABLE-ROOFED BLDG	45'X25'
8	2 GABLE-ROOFED BLDGS	100'X30'
9	SEMI-BURIED BLDG	
10	LOW TOWER	SQUARE
11	BUNKER	60'X15'

25X1

25X1

25X1

25X1

FIGURE 18. VERKHNIY BASKUNCHAK INSTRUMENTATION SITE, KYMTR.

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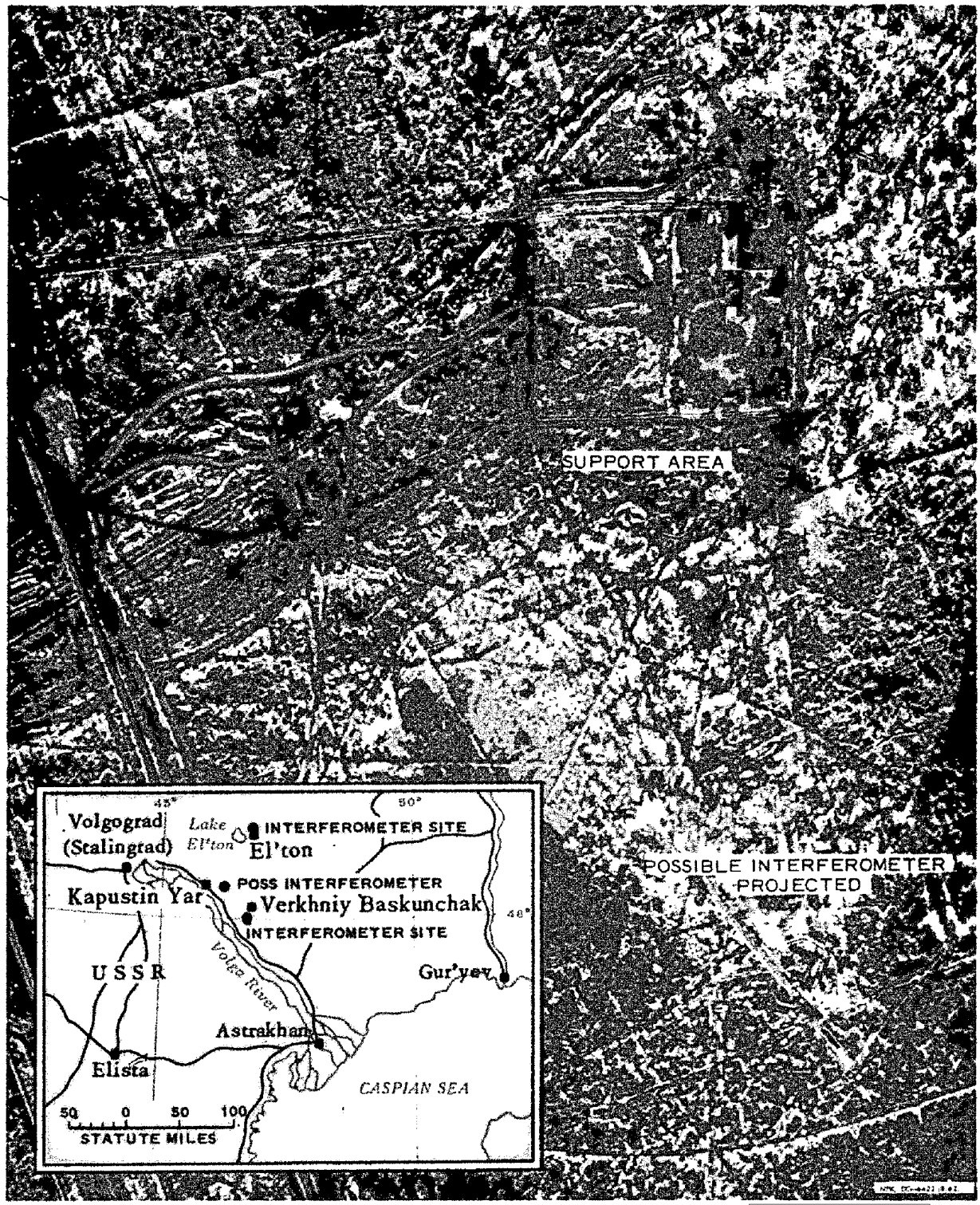

FIGURE 19 LAUNCH COMPLEX "C" INSTRUMENTATION SITE, KYMTR

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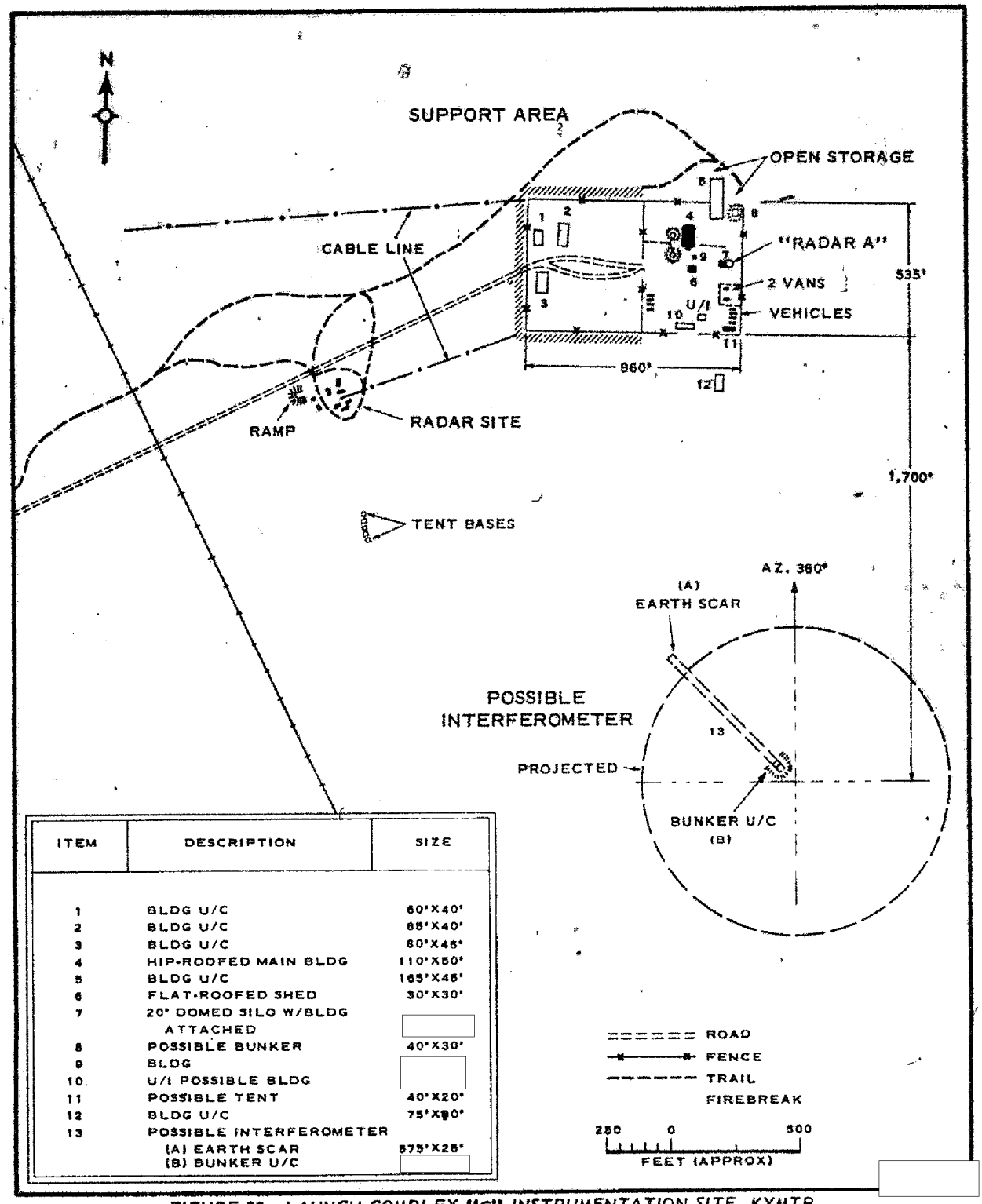
25X1



ITEM	DESCRIPTION	SIZE
1	BLDG U/C	60'X40'
2	BLDG U/C	85'X40'
3	BLDG U/C	80'X45'
4	HIP-ROOFED MAIN BLDG	110'X50'
5	BLDG U/C	165'X45'
6	FLAT-ROOFED SHED	30'X30'
7	20° DOMED SILO W/BLDG ATTACHED	
8	POSSIBLE BUNKER	40'X30'
9	BLDG	
10.	U/I POSSIBLE BLDG	
11	POSSIBLE TENT	40'X20'
12	BLDG U/C	75'X30'
13	POSSIBLE INTERFEROMETER	
	(A) EARTH SCAR	575'X25'
	(B) BUNKER U/C	

25X1

25X1

25X1

FIGURE 20. LAUNCH COMPLEX "C" INSTRUMENTATION SITE, KYMTR.

TTMTR SITES

Tyura Tam Rangehead Site. The interferometer at the Tyura Tam Rangehead, one of the older sites in the USSR, is visible on photography of excellent quality. All construction at the site apparently has been completed because no changes occurred in the interferometer [redacted] 25X1
[redacted] Figures 21 and 22 do not show either the circumferential 25X1
road or the fence found at Sary Shagan. An earth scar [redacted] in diameter 25X1
forms the perimeter of the leveled area. The support area for this interferometer has been designated the Instrumentation Control Center for Tyura Tam. 3/ A possible function of range safety has been delegated to this interferometer.

The interferometer lies between its support area and the launch pad at Launch Complex "A". The only correlation between the launch pad and the interferometer is that a line extended through and beyond the two unidentified towers on the launch pad would pass through the center of the interferometer.

Uka Site. The Uka instrumentation site is located on the Kamchatka Peninsula. Major changes have occurred at this site [redacted] when it 25X1
was first observed on photography (Figures 23 and 24). 4/ Although the quality of the [redacted] photography is poor, it reveals an expansion of the 25X1
support area to more than twice its former size and the presence of a dome 110 feet in diameter and of a tall lattice tower. The latter two items correspond, respectively, to the 110-foot dome at Instrumentation Site 6 and to the numerous lattice towers at the SSATC.

Yelovka Site. This instrumentation site is also located on the Kamchatka Peninsula. Like the site near Uka, it is associated with terminal range activity of the TTMTR. Obliquity of the [redacted] photography prevents 25X1
determination of any changes in the site similar to those at the Uka Site. Like the Uka site, no circular road or leveled area are visible on the photography (Figures 25 and 26). As shown in Table 1, only one "Radar A" is present, as at Tyura Tam and Uka.

KHUTOR SITE

The Khutor instrumentation site (Figures 27 and 28) more closely resembles Instrumentation Site 1 at the SSATC than any other site described in this report. First, it is comparatively isolated from known missile activity. Second, a rhombic antenna farm appears to be in the vicinity. Although no antennas can be identified, rhombic-shaped clearings in a wooded area appear similar to other rhombic antenna farms observed. A nearby KRUG site may or may not be associated with the function of the interferometer.

25X1

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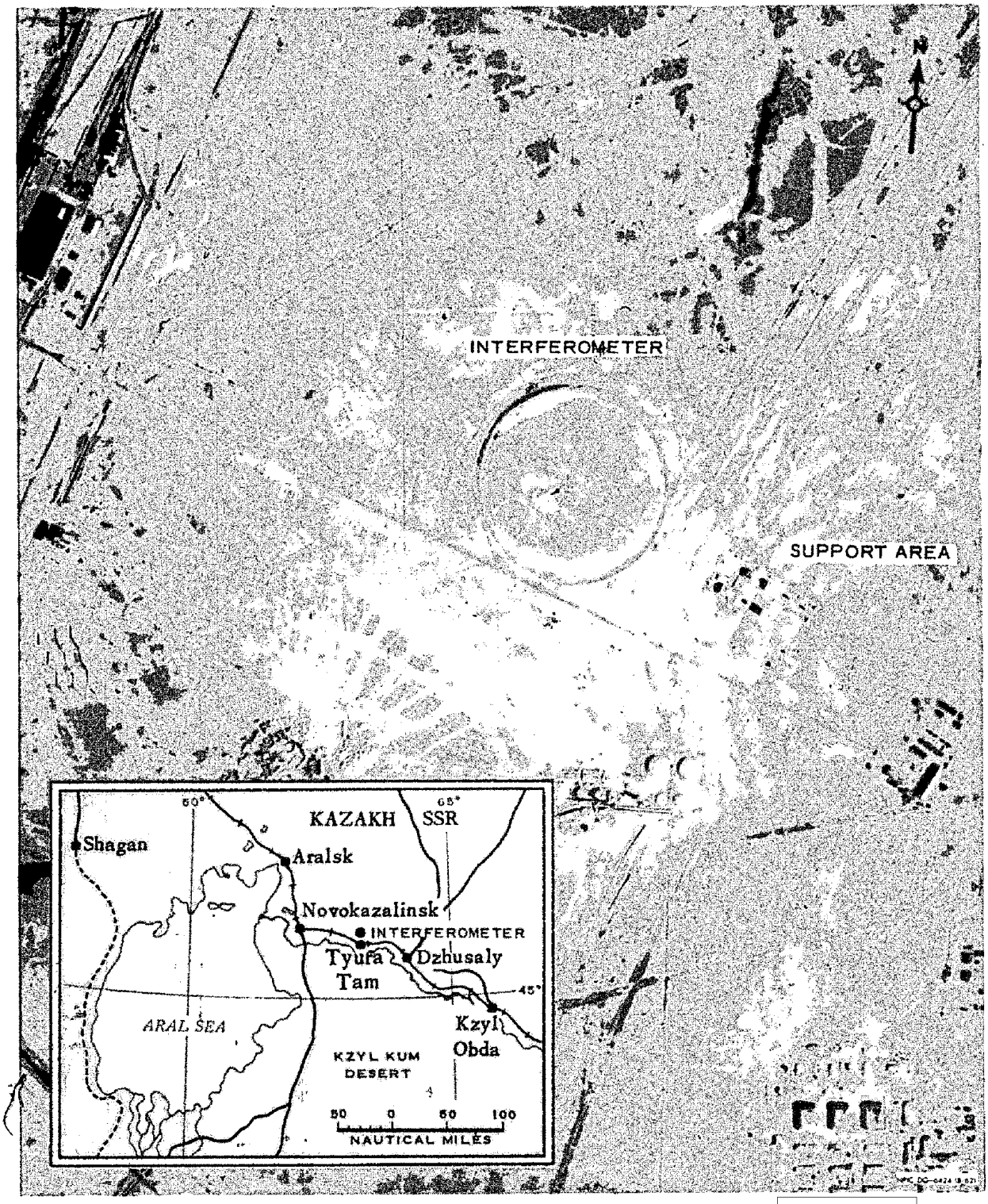

FIGURE 21. TYURA TAM RANGEHEAD INSTRUMENTATION SITE, TTMTR

25X1

25X1

25X1

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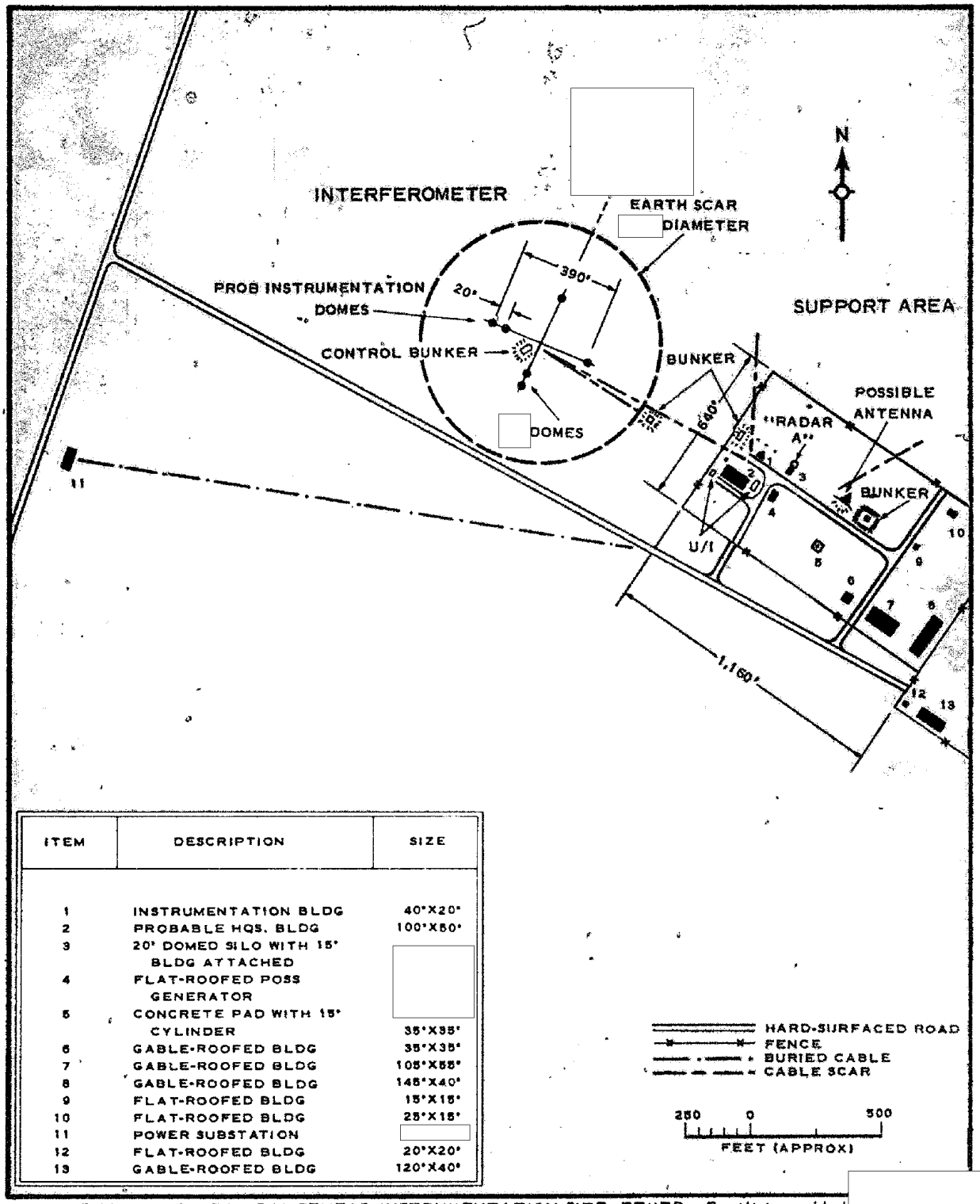

ITEM	DESCRIPTION	SIZE
1	INSTRUMENTATION BLDG	40'X20'
2	PROBABLE HQS. BLDG	100'X50'
3	20' DOMED SILO WITH 15' BLDG ATTACHED	
4	FLAT-ROOFED POSS GENERATOR	
5	CONCRETE PAD WITH 15' CYLINDER	35'X35'
6	GABLE-ROOFED BLDG	35'X35'
7	GABLE-ROOFED BLDG	105'X55'
8	GABLE-ROOFED BLDG	145'X40'
9	FLAT-ROOFED BLDG	15'X15'
10	FLAT-ROOFED BLDG	25'X15'
11	POWER SUBSTATION	
12	FLAT-ROOFED BLDG	20'X20'
13	GABLE-ROOFED BLDG	120'X40'

25X1

25X1

25X1

25X1

25X1

FIGURE 22. TYURA TAM RANGEHEAD INSTRUMENTATION SITE, TTMTR. Facilities added [redacted] *are shown in red.*

25X1

25X1

25X1

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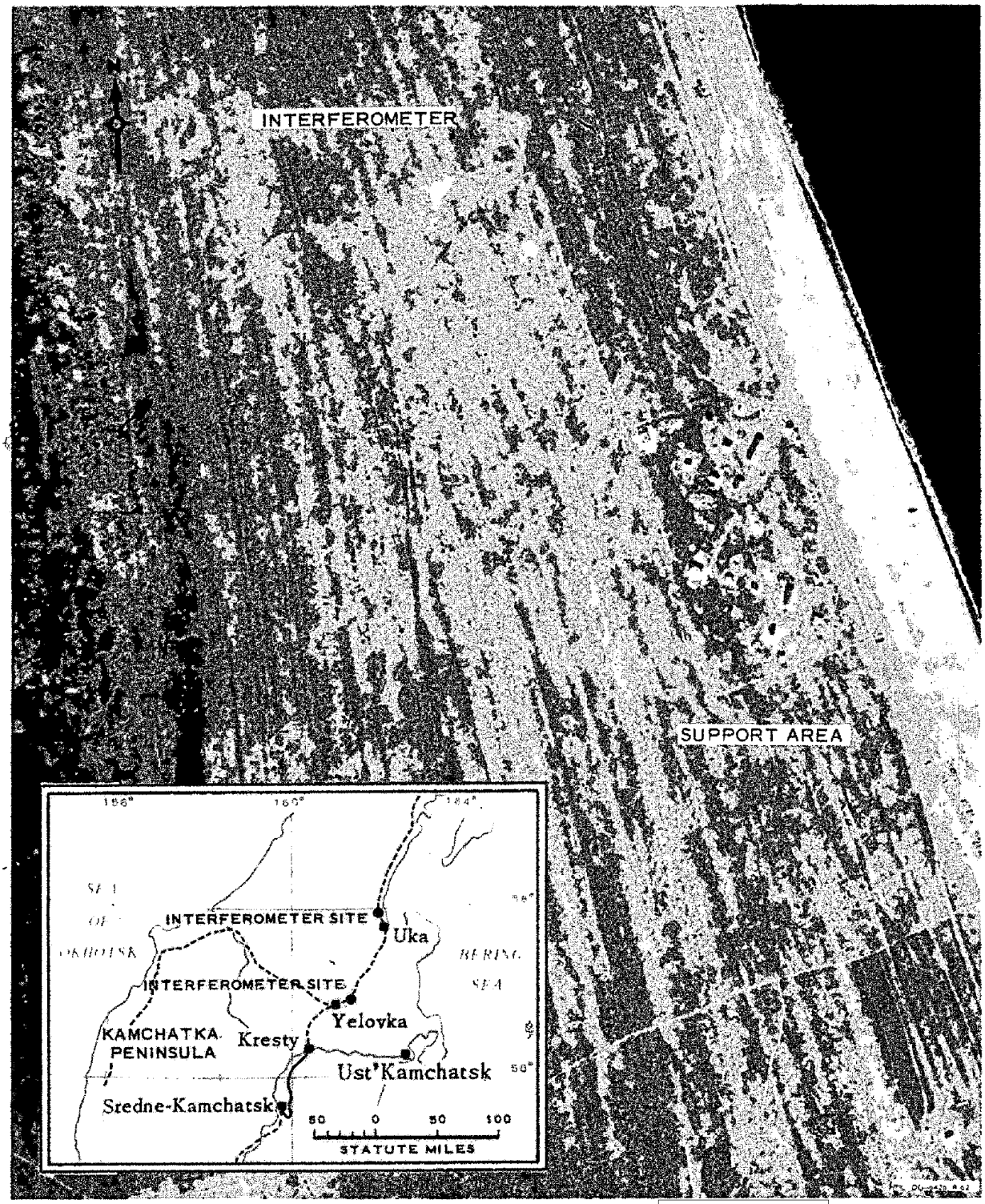
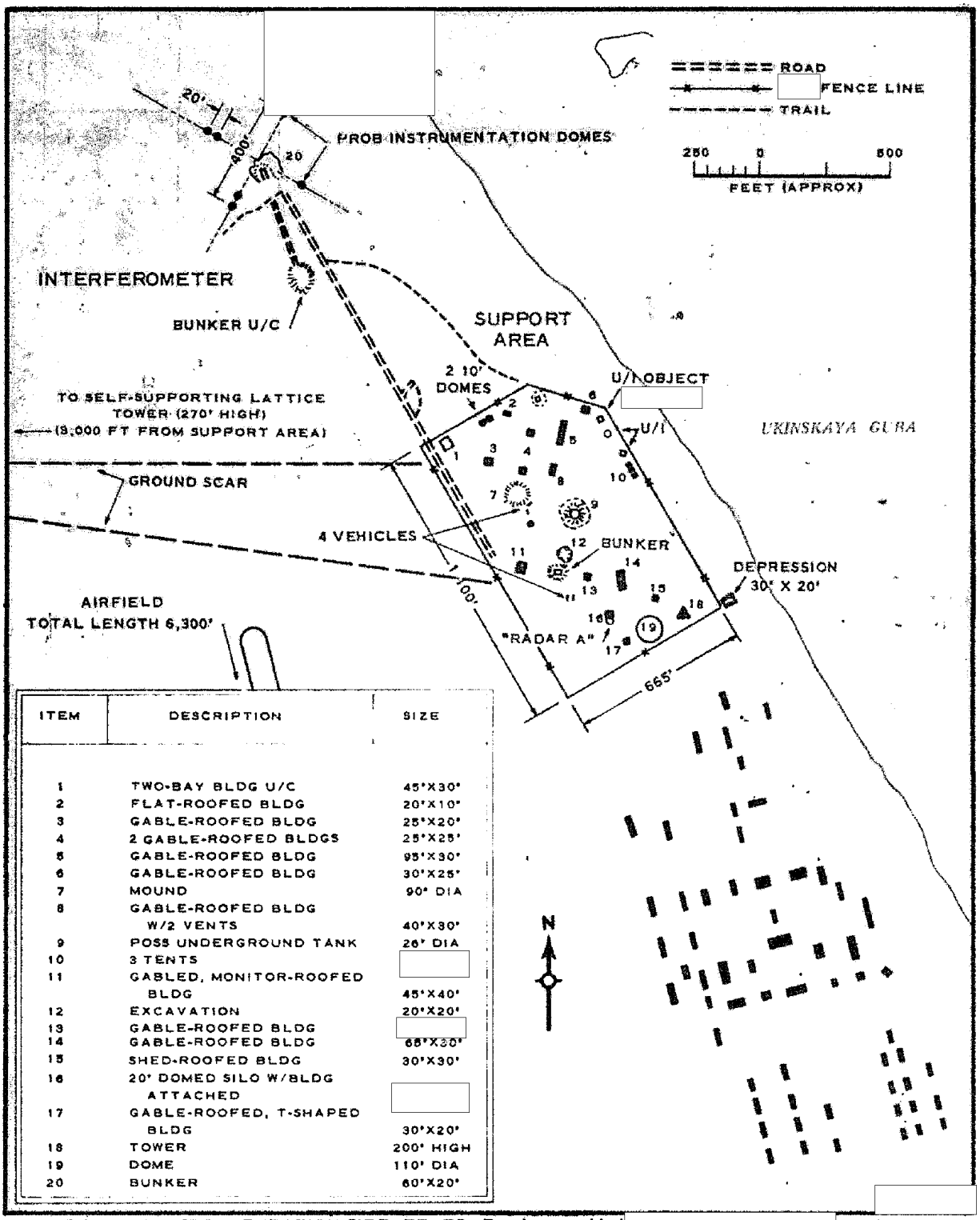


FIGURE 23. UKA INSTRUMENTATION SITE, TTMTR

25X1

25X1



ITEM	DESCRIPTION	SIZE
1	TWO-BAY BLDG U/C	45'X30'
2	FLAT-ROOFED BLDG	20'X10'
3	GABLE-ROOFED BLDG	25'X20'
4	2 GABLE-ROOFED BLDGS	25'X25'
5	GABLE-ROOFED BLDG	95'X30'
6	GABLE-ROOFED BLDG	30'X25'
7	MOUND	90' DIA
8	GABLE-ROOFED BLDG W/2 VENTS	40'X30'
9	POSS UNDERGROUND TANK	26' DIA
10	3 TENTS	
11	GABLED, MONITOR-ROOFED BLDG	45'X40'
12	EXCAVATION	20'X20'
13	GABLE-ROOFED BLDG	
14	GABLE-ROOFED BLDG	65'X30'
15	SHED-ROOFED BLDG	30'X30'
16	20' DOMED SILO W/BLDG ATTACHED	
17	GABLE-ROOFED, T-SHAPED BLDG	30'X20'
18	TOWER	200' HIGH
19	DOME	110' DIA
20	BUNKER	60'X20'

FIGURE 24. UKA INSTRUMENTATION SITE, TTMTR Facilities added [redacted] *are shown in red.*

25X1

25X1

25X1

25X1

25X1

25X1

25X1

25X1

25X1

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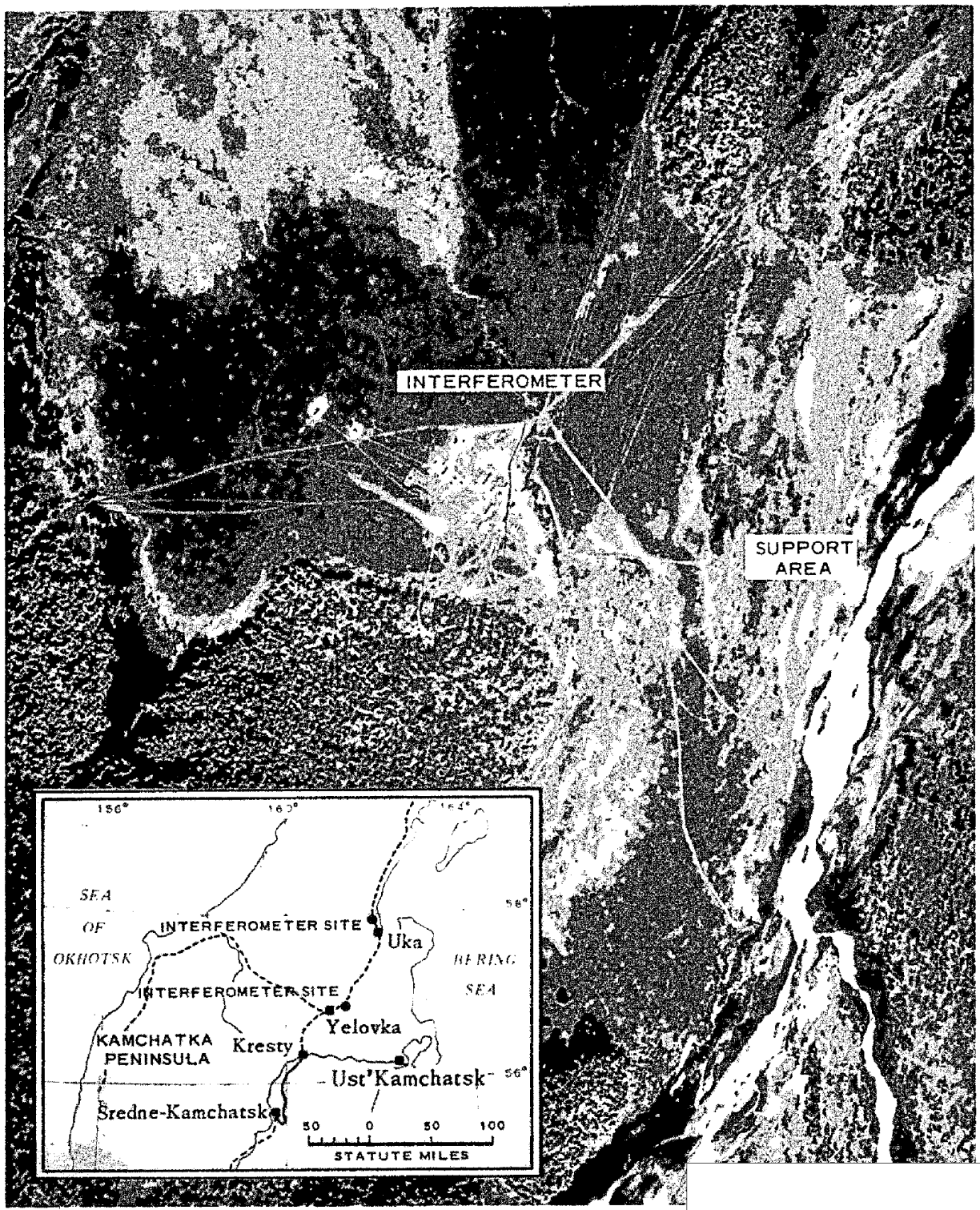
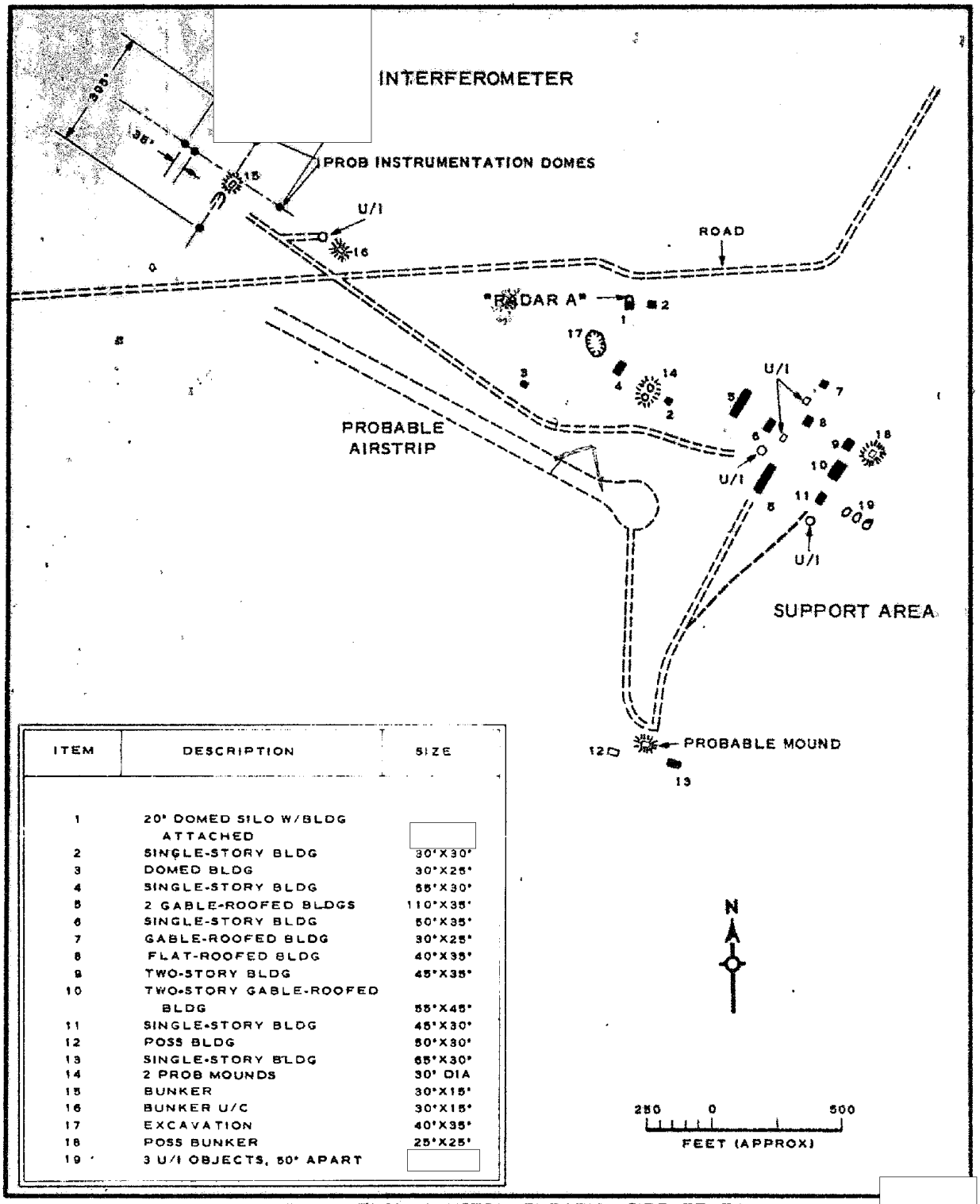


25X1

FIGURE 25. YELOVKA INSTRUMENTATION SITE, TTMTR

25X1



ITEM	DESCRIPTION	SIZE
1	20' DOMED SILO W/BLDG ATTACHED	
2	SINGLE-STORY BLDG	30'X30'
3	DOMED BLDG	30'X25'
4	SINGLE-STORY BLDG	55'X30'
5	2 GABLE-ROOFED BLDGS	110'X35'
6	SINGLE-STORY BLDG	50'X35'
7	GABLE-ROOFED BLDG	30'X25'
8	FLAT-ROOFED BLDG	40'X35'
9	TWO-STORY BLDG	45'X35'
10	TWO-STORY GABLE-ROOFED BLDG	55'X45'
11	SINGLE-STORY BLDG	45'X30'
12	POSS BLDG	50'X30'
13	SINGLE-STORY BLDG	65'X30'
14	2 PROB MOUNDS	30' DIA
15	BUNKER	30'X15'
16	BUNKER U/C	30'X15'
17	EXCAVATION	40'X35'
18	POSS BUNKER	25'X25'
19	3 U/I OBJECTS, 50' APART	

25X1

25X1

25X1

FIGURE 26. YELOVKA INSTRUMENTATION SITE, TTMTR.

25X1

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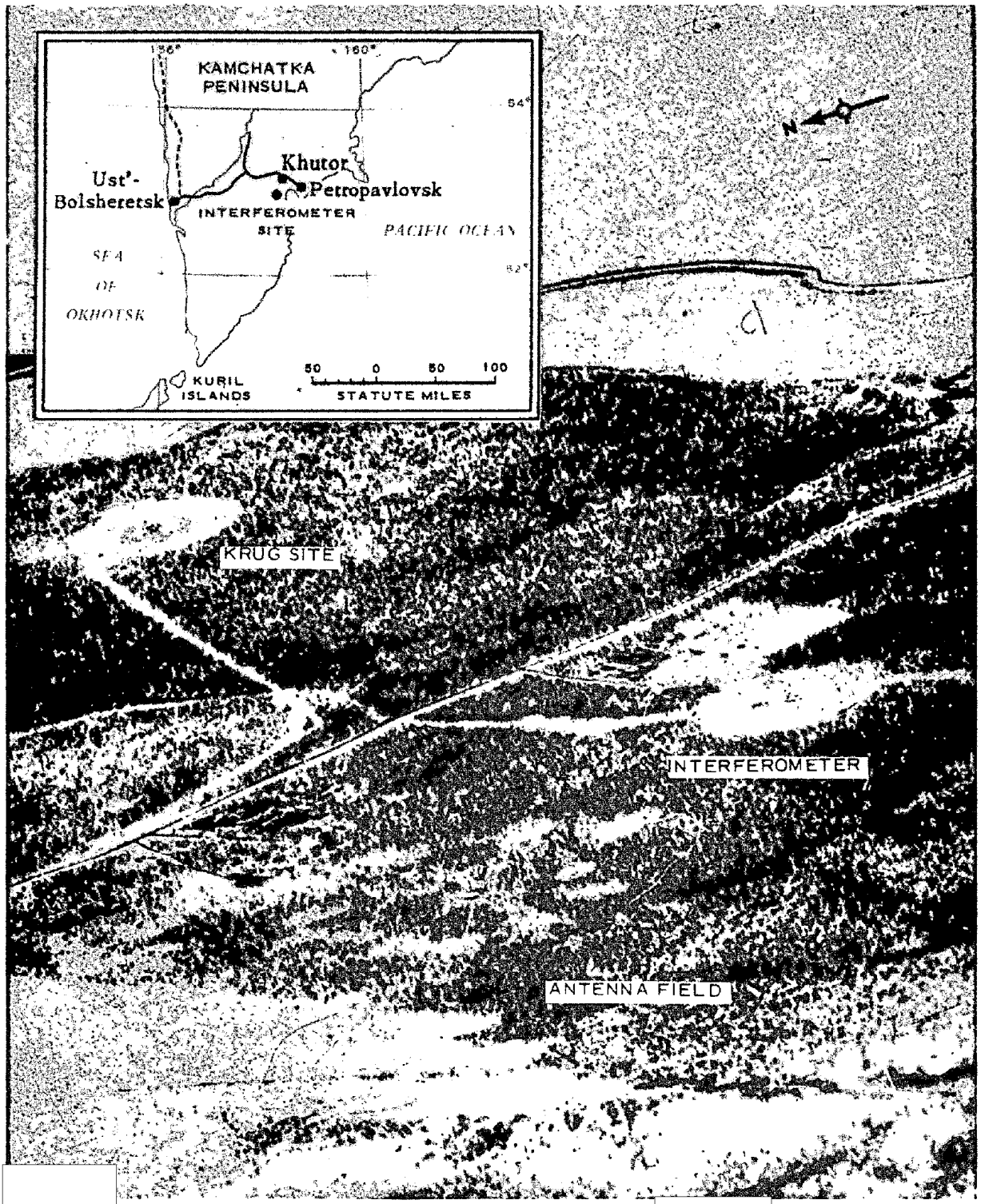
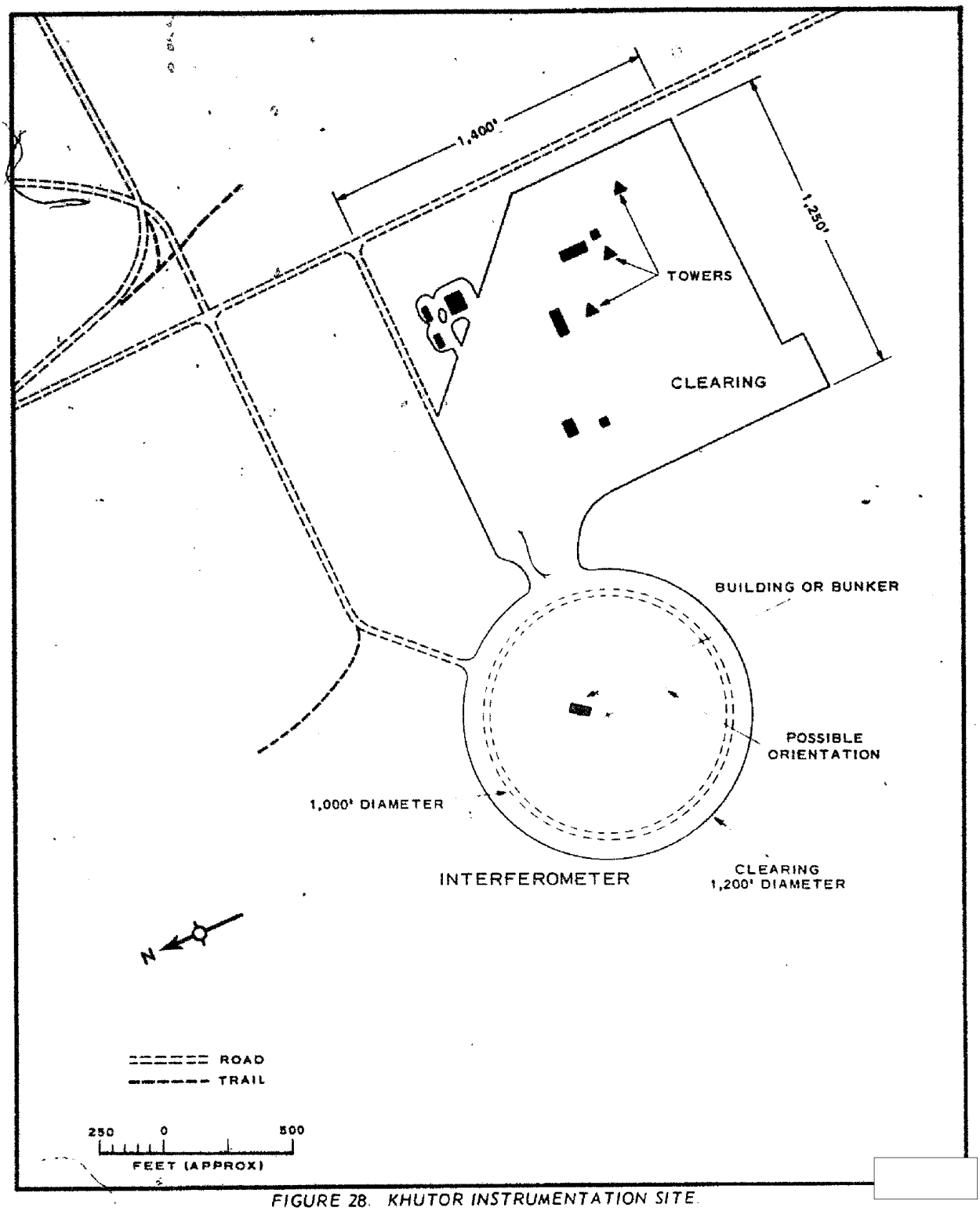


FIGURE 27 KHUTOR INSTRUMENTATION SITE

25X1

25X1

25X1



25X1

FIGURE 28. KHUTOR INSTRUMENTATION SITE.

SECRET

25X1

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TABLE 1. COMPARISON OF INTERFEROMETERS, USSR

Site	Coordinates	Overall Length of Crossarms (Feet)	Diameter of Road (Feet)	Diameter of Fence (Feet)	Number of "Radar Aids"	Orientation of Northing Crossarm (Degrees)	Inner Bunker	Outer Bunker	Description of Crossarms	Remarks
SSATC										
Site 1	45-54N 73-38E	400	1,005	1,250	None	350	70 by 45 feet with ramped entrance 20 feet wide	Possible	Crossarms are situated on a level area 640 feet square. They appear complete, although no domes or instruments are visible.	Site contains four rhombic antennas oriented toward Moscow and a circular pad with probable instrumentation vehicles.
Site 4	45-55N 72-16E	See description of crossarms	960	1,100	5	[redacted]	Possibly complete, ramped entrance	Cloud covered	Crossarms consist of leveled earth. Each arm is 500 feet long and 100 feet wide. No devices can be identified.	Microwave site is under construction near the support area. 25X1
Site 5	45-51N 71-23E	Unknown	Approx. 1,000	Cleared area approx. 1,200	Unknown	Unknown	Unknown	Unknown	Cannot be identified.	No unique features can be identified because of cloud cover.
Site 7	46-36N 70-50E	See description	1,000	1,185	3	[redacted]	Under construction, ramped entrance	Yes	May be under construction, debris throughout the area. Crossarms consist of leveled earth. Each arm is 460 feet long and 60 feet wide. No domes or devices can be identified.	Site contains a Token-type radar with associated vehicles, and a microwave installation. 25X1
Site 8	46-54N 70-55E	400	1,000	1,200	Unknown	Approx. 20	Possible	Unknown	Four objects or scars can be seen, each 200 feet from the center, which may be the ends of the arms. Crossarms are centered on a 600-foot square, level ground pattern.	Much larger than Site 7, this site also contains a Token radar with associated vehicles, a microwave installation, and an airstrip.
Site 9	46-50N 71-55E	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Interferometer is not visible. Site has been identified by the support area.	A microwave installation and an airstrip are adjacent to the area.
Site 11	46-39N 72-37E	400	1,000	1,200	Unknown	[redacted]	Unknown	Unknown	Four scars or mounds can be seen, each 200 feet from the center, which may be the ends of the arms.	A microwave installation is adjacent to the area. 25X1
Site 12	46-24N 72-34E	Unknown	Approx 1,000	Unknown	5	Unknown	Unknown	Unknown	Cannot be identified.	A possible microwave installation and an area of ground scarring are adjacent to the area.
KYMTR										
Lake Elton	49-10N 46-52E	Unknown	Under construction	None	1	Unknown	[redacted]	Unknown	Crossarms cannot be identified, but a level ground pattern approximately 600 feet square can be seen in the circular area.	Support area similar to that of the Uka Site [redacted] 25X1 25X1
Verkhniy Baskunchak	48-12N 46-12E	400	1,050	None	2	[redacted]	Approx. 60 by 15 feet; ramped entrance	Unknown	Three domes, 25 feet apart, are on two adjacent arms; a single dome is on the other two arms.	Support area similar to that of the Uka Site [redacted] 25X1 25X1
Complex "C"	48-37N 46-16E	None	None	None	1	360	Under construction; ramped entrance	None	No crossarms or domes have been constructed.	Support area similar to that of the Uka Site [redacted] and to the Tyura Tam interferometer site. 25X1
TTMTR										25X1
Tyura Tam	45-54N 63-20E	390	None	[redacted]	1	[redacted]	Complete; ramped entrance	Yes	[redacted] 20 feet apart, are on two adjacent arms; a single dome is on each of the other arms.	The interferometer is colocated with the Instrumentation Control Center for the range and may have a function of range safety.
Uka	57-51N 162-50E	400	None	None	1	[redacted]	Complete; 60 by 20 feet; ramped entrance	Yes	Nearly identical to those at the Tyura Tam Site; length differs by 10 feet.	This site has been enlarged [redacted] A 110-foot dome, a tall lattice tower, and numerous support buildings have been added. 25X1
Yelovka	58-57N 161-15E	[redacted]	None	None	1	[redacted]	Complete; 30 by 15 feet; ramped entrance	30 by 15 feet	Identical to those at the Uka and Tyura Tam Sites.	No indication of local communications or microwave at the site. 25X1
KHUTOR	53-05N 158-20E	Unknown	Approx. 1,000	Clearing 1,200	Unknown	Unknown	Possible	Unknown	Cannot be identified.	A Krug site is located near the interferometer. A number of rhombic clearings indicate the probability of rhombic antennas.

25X1

25X1

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25X1

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DOCUMENTS

1. CIA. PIC/JR-1010/61, Antimissile Complex, Sary Shagan, USSR, Apr 61 (SECRET 25X1
25X1

2. CIA. PIC/JB-1016/60, Kapustin Yar/Vladimirovka Missile Test Center, USSR, 1 Dec 60, (SECRET 25X1

3. CIA. PIC/JB-1011/61, Missile Test Center, Tyura Tam, USSR, Apr 61 (SECRET 25X1
25X1

4. NPIC. NPIC/B-1007/61, Missile Tracking Station Near Uka, Kamchatka Peninsula, USSR, Sep 61 (SECRET 25X1

REQUIREMENT

CIA. DDI/OSI/R-75/61

NPIC PROJECT

JN-143/61

25X1